REDACTED - FOR PUBLIC INSPECTION

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	
International Comparison and Consumer Survey Requirements in the Broadband Data Improvement Act	)	GN Docket No. 09-47
	)	
A National Broadband Plan for our Future	)	GN Docket No. 09-51
	)	
Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, as Amended by the Broadband Data Improvement Act	)	GN Docket No. 09-137

COMMENTS - NBP PUBLIC NOTICE #19

PAETEC COMMUNICATIONS, INC., U.S. TELEPACIFIC CORP. AND MPOWER COMUNICATIONS CORP. BOTH D/B/A TELEPACIFIC COMMUNICATIONS, AND RCN TELCOM SERVICES, INC.

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Dated: December 7, 2009

SUMMARY

Intercarrier compensation rates should be based on a carrier's forward looking costs. Setting a uniform rate for termination will help reduce disputes about regulatory classifications and payment, ensure that carriers recover their termination costs, and enable carriers to focus their personnel and capital resources on research, development, and investment in broadband networks and services. The FCC should seek data on termination costs to determine whether current intercarrier compensation rates are too high or too low. The FCC should not assume that the difference between cost and current rates must be moved to explicit universal service support. Rather, the universal service support mechanism should first determine what services to support and next calculate the revenue necessary to support such services.

The costs of terminating traffic for most LECs are well above a uniform rate of $0.0007 per minute of use. No matter how efficient a carrier's network design, the costs of terminating traffic vary widely by company due to variances in customer density, switch utilization, economies of scope and scale, and network architecture. These variations make it inappropriate to adopt a uniform statewide average rate for all companies.

Implementation of a safe harbor benchmark approach to set intercarrier compensation rates could be acceptable provided the benchmarks are reasonable. With their huge economies of scale and scope and vertical integration, neither AT&T or Verizon provide a reasonable benchmark for CLECs. Rather, based upon their similar economies of scale, customer density, and other cost related factors, CLECs should be benchmarked to mid-sized incumbent LECs. The FCC, in partnership with the states, should establish cost-based, benchmark rates for different classes of LECs and allow the industry ample time to transition to the benchmark rates. Carriers need time to adjust their business plans, renegotiate agreements, and modify operations to identify and implement alternative means of covering any revenues lost during a transition to benchmark rates. While the length of the

transition may vary by state, Joint Commenters estimate that four to five years would, on average, provide carriers time to transition to benchmark rates. Finally, any reform should adopt measures that preclude ILECs or other IXCs from using self help to extract unlawful concessions from CLECs and smaller LECs.

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PAETEC Communications, Inc., US LEC, and McLeodUSA Telecommunications Services, Inc., all d/b/a "PAETEC" (jointly referred to as "PAETEC"); U.S. TelePacific Corp. and Mpower Communications Corp, both d/b/a TelePacific Communications (jointly referred to as "TelePacific"); and RCN Telecom Services, Inc. ("RCN"), collectively the "Joint Commenters," respectfully submit these comments for inclusion in the above-referenced dockets regarding the role of the universal service fund and intercarrier compensation regimes in the development of National Broadband Plan[1] by the Federal Communication Commission (the "Commission"), as mandated by the

[1] *See In the Matter of National Broadband Plan for Our Future*, Notice of Inquiry, GN Docket No. 09-51, Notice of Inquiry, 24 FCC Rcd. 4342 (rel. Apr. 8, 2009) ("Broadband Plan NOI").

American Recovery and Reinvestment Act of 2009.[2] These Comments respond to the Commission's NBP Public Notice No. 19 and adhere to the organization and structure of the questions in the Public Notice as requested by the Commission.[3] Accordingly, we have used the Commission's paragraph numbering scheme to identify the questions in the Public Notice that we are addressing and have repeated the relevant questions in bold type prior to our comments on the issues presented. The Joint CLECs focus their comments on the impact of intercarrier compensation policies on broadband deployment.

4. Impact of Changes in Current Revenue Flows. Some commenters assert that any significant reductions in current levels of universal service high-cost support and/or intercarrier compensation would jeopardize their ability to continue to serve customers and advance the deployment of next generation broadband-capable networks. Others assert that the current systems of support and compensation have led to regulatory arbitrage and inefficient investment and have undermined the deployment of advanced communications.

4.a. What factual analyses should the Commission undertake to test the validity of such arguments?

The Record Compiled in CC Docket 01-92 Provides Evidence of Cost-based Rates that Can Assist the Commission in Determining Whether Current Intercarrier Compensation Rates Are Above or Below Cost

In order to test the validity of these and other hypotheses, the Commission should obtain carrier-specific cost data from a variety of carriers of different sizes, operating in different regions with varying customer densities, and with different technologies to determine the actual forward-looking costs of transporting and terminating traffic for specific carriers and classes of carriers. This approach is the only method that would ensure that all carriers are able to recover their costs through "just and reasonable" rates as they are entitled to do under the Act.[4]

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[2] American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, 123 Stat. 115 (2009).

[3] *Comment Sought on the Role of the Universal Service Fund and Intercarrier Compensation In the National Broadband Plan*, NBP Public Notice No. 19, GN Docket Nos. 09-47, 09-51, 09-137, DA 09-2419, at 8 (rel. Nov. 13, 2009) ("Public Notice").

[4] 47 U.S.C. § 201.

State commissions have already set cost-based rates through TELRIC studies that set compensation rates for termination of Section 251(b)(5) traffic. A chart of the Section 251(b)(5) rates established by state commission is attached as **Exhibit 1**. Numerous CLECs, including PAETEC, engaged QSI to perform cost studies that establish each CLEC's cost of providing various types of services, including interexchange termination services, in accord with the premise that "a minute is a minute." PAETEC confidentially filed the results of its studies in CC Docket 01-92. The Commission should gather this factual data and compare it to the intercarrier compensation rates carriers charge today (interstate and intrastate access, reciprocal compensation) to determine the delta between the cost-based rate of terminating a minute of use and the non-cost-based rates that carriers charge under today's broken and Byzantine system. Joint Commenters expect that this analysis will show some intercarrier compensation rates are far above cost, while others are below cost.

After comparing current rates to a cost-based rates, the Commission should not, however, assume that the higher rate is an implicit subsidy that should be moved into end user rates or universal service support. Notwithstanding numerous attempts to do so, the Commission has had difficulty determining if access rates are in fact subsidizing universal service.[5] In 2000, the Commission promised to examine access rates "at the close of the [five year] period specified in the *CALLS Order*;"[6] however, to date the Commission has not revisited the issue. Joint

[5] *In the Matter of Access Charge Reform,* 15 FCC Rcd 12962, CC Docket No. 96-262, Sixth Report and Order, at ¶¶ 23, 39, 189, 201 (2000) ("*CALLS Order*") ("determining the amount of implicit universal service support is an imprecise exercise at best."); Multi-Association Group (MAG) Plan for Regulation of Interstate Services of Non-Price Cap Incumbent Local Exchange Carriers and Interexchange Carriers, CC Docket Nos. 00-256, 96-45, 98-77, 98-166, FCC 01-304, Second Report and Order and Further Notice of Public Rulemaking, at ¶ 12 (rel. Nov. 8, 2001) ("the amount of implicit support in interstate access charges is a difficult, controversial issue without simple or precise solutions. This is particularly so for rate-of-return carriers, given their size, diversity, and regulatory history.") ("MAG Order").

[6] *In the Matter of Access Charge Reform, Reform of Access Charges Imposed by Competitive Local Exchange Carriers*, 16 FCCR 9923, CC Docket No. 96-262, FCC 01-146, Seventh Report and Order and Further Notice of Proposed Rulemaking, at ¶¶ 7, 19 (rel. April 27, 2001) ("*CLEC Access Charge Order*").

Commenters submit that a universal service model should establish the amount of support necessary for broadband networks. If the Commission wants to support broadband networks and it determines that a carrier cannot recover the cost of deploying a broadband network through end user rates paid for the services a carrier can offer over that network, any difference should come from the universal service fund.

Establishing a Uniform Intercarrier Compensation Rate that Is Below Cost Could Undermine Broadband Deployment

Below-cost rates are just as problematic as above-cost rates. Any deviation from cost will provide incentives to engage in arbitrage and stymie competition and innovation by those LECs that are forced to provide terminating access below cost. For example, a below-cost rate could encourage some carriers to seek out customers that only originate traffic (such as telemarketers). As the largest consumers of access services, the RBOC's long-distance affiliates would benefit enormously from below-cost termination rates for long distance traffic that they would reap from CLECs and smaller higher costs carriers.[7] Requiring these LECs to provide below-cost termination services to IXCs and shift the unrecovered costs of IXC traffic termination to their local end user customers would be an implicit subsidy of long distance service that violates the Act.[8]

Setting intercarrier compensation rates below-cost would also redirect investment from new products and services in order to recover the costs of call termination. For example, many CLECs have developed integrated access products for small business customers. Using a T-1 or bonded copper, the CLEC provides a small business with a voice, data, and broadband Internet

[7] Ankum Declaration, at ¶¶ 15, 37, 79.

[8] 47 U.S.C. § 254.

access service that is flexible and scalable to meet the business' needs. RBOCs typically do not offer such services or target their research and new offerings on the small business market.

The problem of below-cost rates is compounded if some, but not all, carriers can recover their costs through universal service funding. If the termination rate for CLECs and other carriers that lack Verizon and AT&T's economies of scope and scale are set at below-cost levels and the subsidy for some ILECs is moved to universal service in which CLECs cannot participate, then the result will not be competitively neutral. A CLEC that cannot recover its cost of termination and is forced to recoup such costs through retail rates would suffer a competitive disadvantage in the retail broadband market. Fairness requires that if funding of broadband infrastructure is to be accomplished via USF contributions, then all service providers must have access to bottleneck elements of an ILEC's broadband network. That is, if a CLEC's end users are assessed a USF charge to fund an ILEC's build out of broadband fiber loops, then the CLEC should be permitted access to those last mile loops to serve CLEC end users. Otherwise, CLEC end users are funding the build out of a new broadband infrastructure while never being able to benefit from using that infrastructure.

AT&T, Verizon, and a handful of other carriers, *without any consideration of actual carrier-specific costs*, support a unified state-wide rate for call termination that would apply to all types of carriers, regardless of carrier size, economies of scope and scale, the customer density served, and specific traffic sensitive costs. Their proposed uniform terminating rate would be at or less than the current federal reciprocal compensation rate of $0.0007 per minute of use ("MOU") and possibly even zero.[9] Not surprisingly, some proponents of this below-cost

[9] *See, e.g.,* AT& T Comments, at 5; Verizon Comments, at 42-43 (the FCC should "reject suggestions that different carriers should receive different compensation for terminating traffic, either by expressly establishing different terminating rates or by imposing different rights"); T-Mobile USA Comments, at 6; *see, also*, High-Cost Universal Service Support, Federal-State Joint Board on Universal Service, Lifeline and Link Up,

rate propose to eliminate the risk to their business models by ensuring that they are protected from any shortfall in revenues by new make-whole mechanisms implemented within a revised Universal Service Fund ("USF").[10] Unlike ILECs, CLECs would not be able to recover from the USF any difference between a cost-based rate and a below-cost rate, meaning that CLECs would have to absorb, or recover from their end users (which is not realistic) the entire revenue shortfall—estimated to be at least $1.2 billion annually at the $0.0007 per minute rate.[11]

This vision of a uniform, below-cost price for call termination does not work on the PSTN. In a competitive market, if firms cannot meet the market price, they have the option of choosing not to provide the product. This protection—*the freedom of not having to serve customer unprofitably*—is essential to the proper functioning of markets. Here, however, terminating carriers do not have the option of refusing to serve. LECs are required to terminate calls for all other carriers and may not refuse service even when it is unprofitable to do so.

The premise that all carriers, statewide, have uniform terminating costs is contradicted by the evidence. State cost studies established different Section 251(b)(5) rates for different carriers.[12] The assumption that call termination is a uniform product with a uniform cost rests on the fundamental (and wrong) premise that CLECs must be as efficient (same price) as the dominant carrier or exit the market. That premise is unreasonable given that CLECs did not

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Universal Service Contribution Methodology, Numbering Resource Optimization, Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, Developing a Unified Intercarrier Compensation Regime, Intercarrier Compensation for ISP-Bound Traffic, IPEnabled Services, Order on Remand and Report and Order and Further Notice of Proposed Rulemaking, Docket Nos. 05-337, 96-45, 03-109, 06-122, 99-200, 96-98, 01-92, 99-68 & 04-36, FCC 08-262, at , Appendix A, at ¶¶ 192-93, 202, 229, 273 (rel. Nov. 5, 2008) ("ICC FNPRM").

[10] AT& T Comments, at 5; Verizon Comments, at 42-43.

[11] *Reply Declaration of August H. Ankum, Ph.D and Olesya Denny, Ph.D on behalf of PAETEC*, WC Docket Nos. 03-109, 04-36, 05-337, 06-122, and 07-135, CC Docket Nos. 96-45, 96-98, 99-200, and 01-92, at ¶¶ 28-29(Dec. 22, 2008) ("Ankum Declaration").

[12] *See* Exhibit 1.

have the RBOCs' government sanctioned monopoly that enabled them to achieve economies of scope and scale that CLECs cannot match.

The 1996 Act made the policy decision to support competition in local exchange markets. CLEC growth exploded after the 1996 Act, however, subsequent economic downturns resulted in numerous bankruptcies and consolidations. Although there are a considerable number of financially viable CLECs today, many are still saddled with large debt obligations incurred to build out their networks. These debt obligations, higher cost of capital, and smaller customer base over which to distribute such costs, necessarily results in CLECs having a higher cost of call termination than the RBOCs. Thus, the CLECs that are successful in today's market are most like mid-sized LECs from a cost perspective. If the FCC adopts benchmarked rates, CLECs should be benchmarked to mid-sized ILECs.

AT&T's and Verizon's position obscures the fact that no matter how efficient a carrier's network design, the costs of terminating traffic vary widely by company due to variances in customer density, switch utilization, economies of scope and scale, and network architecture. These variations make it inappropriate to adopt a uniform statewide average rate for all companies. For example, a study conducted by QSI on behalf of PAETEC and described in a Declaration by Michael Starkey establishes that "PAETEC cannot originate or terminate switched voice traffic at costs equal to or less than $0.0007 per minute."[13] In fact, PAETEC's costs of terminating telecommunications traffic (regardless of whether the traffic is local, intrastate long distance, interstate long distance, ISP-bound, IP-PSTN, or PSTN-IP) are ***many times higher*** than $0.0007.[14] Thus, notwithstanding the fact that PAETEC is one of the most

[13] PAETEC *Ex Parte* Communication, Declaration of Michael Starkey, at ¶ 2 (Oct. 17, 2008) ("Declaration of Michael Starkey"). This QSI Study is attached as **Exhibit 2** herein.

[14] Declaration of Michael Starkey, at ¶¶ 2-3, 7.

efficient CLECs QSI has performed a cost study for, even PAETEC cannot recover its costs of termination with a $0.0007 rate.[15] Moreover, QSI's experience with other CLECs demonstrates that "even the largest, most efficient CLECs trail substantially behind AT&T and Verizon with respect to economies of scale required to produce per-minute-of-use costs anywhere near the $0.0007 figure proposed by some parties in this proceeding."[16]

The record in the Commission's intercarrier compensation docket (01-92) reveals that AT&T's and Verizon's per minute costs to terminate traffic stand as outliers compared to the costs that other carriers in the industry incur and should not serve as a benchmark for any other carrier that is not also an RBOC. Virtually every LEC has substantially higher termination costs than AT&T and Verizon.[17] This is not surprising because AT&T and Verizon are enormous, vertically integrated companies with huge integrated long-distance affiliates, and unmatchable economies of scale and scope that dwarf the remainder of the industry. As the QSI Study found, "the sheer volume and scale of their businesses, garnered in large part from their unique/shared origins as government protected monopolists, provide them economies of scale no other carrier has yet been able to match"[18] or is likely to match in the near term. For example, in Texas, AT&T-Texas sells nearly 13 times more switched access minutes per year than does

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[15] Declaration of Michael Starkey, at ¶¶ 2, 7 ("I can state with certainty that a rate equal to $0.0007 would fall far short of properly compensating PAETEC for the capital it has deployed and the expenses it incurs in transporting and switching voice-related services.").

[16] Declaration of Michael Starkey, at ¶ 3; *See, e.g., In the Matter of High-Cost Universal Support, Developing a Unified Intercarrier Compensation Regime, et al.;*WC Dockets Nos. 05-337, 03-109, CC Docket Nos. 96-45, 99-200, 96-98, 01-92, 99-68, Declaration of Lee Selwyn Submitted on behalf of Broadview Networks, Inc. Cavalier Communications, Nuvox Inc., tw telecom, inc., and XO Communications, Inc., at iv, 28 (Nov. 26, 2008); *In the Matter of High-Cost Universal Support, et al.;* CC Docket Nos. 96-45, 99-200, 96-98, 01-92, 99-68, Reply Comments of Broadview Networks, Inc. Cavalier Telephone, NuVox, and XO Communications, Inc., at 7-8, 12-13 (Dec. 22, 2008) ("Verizon's proposal is predicated on the faulty assumption that $0.0007 per minute is a reasonable approximation of the additional costs of terminating calls.") ("NuVox Reply Comments").

[17] *See, e.g.*, MAGS Order, at 4 ("Rate-of-return carriers are typically small, rural telephone companies concentrated in one area . . . They generally have higher operating and equipment costs than price cap carriers due to lower subscriber density, smaller exchanges, and limited economies of scale.").

[18] Declaration of Michael Starkey, at ¶ 3.

McLeodUSA, a PAETEC subsidiary in Texas. AT&T's economies of scale in Texas dwarf those of smaller carriers and significantly reduce its costs compared to CLECs, mid-sized LECs and small LECs.[19]

AT&T and Verizon's costs for terminating traffic cannot reasonably be relied upon as an accurate benchmark or proxy for typical industry costs of terminating telecommunications traffic, and, therefore cannot produce a "just and reasonable" rate levels that CLECs and smaller LECs are entitled to charge for their termination services under the Act.[20] CLECs and midsized LECs have lower customer densities, lower switch utilization, fewer switches and more transport, and higher per-unit network costs than RBOCs. If the FCC adopts benchmarked rates, CLECs should be benchmarked to mid-sized ILECs.[21]

The QSI Study concludes that the CLECs' lower customer densities and lower switch utilization rates as compared to the RBOCs are major drivers of their higher terminating costs. Although CLECs generally operate in more densely populated areas, they experience markedly lower customer density because their relatively few customers are geographically dispersed within those areas. Because a CLEC serves only a fraction of the customers in an RBOC's local calling area, if a CLEC's customer density is expressed on a customer-per-square mile basis, it is significantly lower than an RBOC's. For example, a QSI study comparing CLEC line density to

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[19] Declaration of Michael Starkey, Exhibit 2, at 40.

[20] 47 U.S.C. § 201.

[21] Windstream Comments, at 37-38 (Nov. 26, 2008) ("[g]iven the differences in areas served by the RBOCs, wireless carriers, CLECs, and small and mid-sized ILECs, there is no reason to accept or conclude that the terminating costs for all of these different types of carriers within a state will be equal."); Cincinnati Bell Comments, at 13 (Nov. 26, 2008) ("unreasonable and inappropriate to assume that mid-size and small carriers can realize the benefits of the economies of scale and scope that the large integrated national carriers have achieved."); Embarq Comments, at 27 (Nov. 26, 2008) ("[t]he proposed order fails to explain how and why it can set a rate, much less a uniform rate cap for all carriers and virtually all states, without any regard to those carriers' actual network costs.").

that of two RBOCs found that the RBOCs' line density (measured in customers per square mile) was 24 and 35 times more than the CLECs'.[22]

CLECs also have significantly lower switch utilization rates over the useful life of a switch than an RBOC which is a primary driver of their higher terminating costs. The QSI study shows that even though a CLEC may aggregate customers over a larger area, an average CLEC has fewer lines per switch than the competing RBOC. Accordingly, it costs a CLEC more than a RBOC to switch any given call.[23] CLECs typically employ the most efficient, state-of-the-art switching equipment with SONET rings or other high-capacity transport. These switches are capable of serving as many as one hundred thousand customers. RBOCs deploy these switches, or add switch modules, to serve an established and robust customer base. In contrast, a CLEC must deploy a new switch to enter a market, even if it has very few customers. This means that the utilization of a CLEC's switch is substantially below full capacity over much of that switch's economic life whereas from the moment an ILEC installs a digital switch, it will be able to achieve a higher rate of utilization relative to a new entrant.[24]

In addition, due to their small market share, CLECs do not have the bargaining power of the large ILECs to induce suppliers of telecommunications equipment and other critical inputs to offer discounts approaching those negotiated by AT&T, Verizon and other large ILECs.[25] Furthermore, for smaller carriers for whom it is more efficient to lease (rather than build) fiber

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[22] Declaration of Michael Starkey, at ¶¶ 9-10 and Exhibit 2, at 44-49; Ankum Declaration, at ¶¶ 45-46 ("the average size of the Other LEC's wire centers (a measure of customer density) is approximately 10% of Qwest's wire center size" in Wyoming).

[23] Declaration of Michael Starkey, Exhibit 2, at 50-51. The Commission has "acknowledged that CLEC access rates may, in fact, be higher due to the CLEC's higher start-up costs for building new networks, their small geographic service areas, and *the limited number of subscribers over which CLECs can distribute costs.*" *CLEC Access Charge Order*, at ¶ 18 (emphasis added).

[24] Declaration of Michael Starkey, Exhibit 2, at 43.

[25] Declaration of Michael Starkey, Exhibit 2, at 51-52.

transport, the cost of additional transport capacity is clearly non-trivial and is essentially a linear function of transport prices (i.e., costs increase in direct relationship to traffic volumes): for example, to increase its transport capacity from one DS3 to two DS3 circuits, a company leasing fiber would have to double its leasing costs. In other words, the additional incremental cost of transporting terminating traffic is far from zero and these costs have been increasing as RBOCs receive price flexibility in special access markets and access to UNEs has been curtailed.[26]

AT&T argues that terminating rates should be uniform within each state because "the unit costs of soft-switches do not vary from carrier to carrier," such that proposals to set varying terminating rates that are based on a carrier's costs "may thus lack any empirical foundation."[27] It is astounding that AT&T would make such a claim since it produces no evidence that a CLEC can purchase a soft switch for the same price as AT&T. History shows that RBOCs have consistently been able to acquire any type of switching equipment at a much lower price both because of their bargaining power and volume purchases— they buy more and can demand more flexibility and concessions. These discounts were not disclosed for many years but CLECs uncovered them in the second round of TELRIC dockets. Given that these companies are significantly larger today than back in 2000-2002 when these discounts became known, there can be little doubt that RBOCs continue to have access to discounts that are not available to other carriers.

Moreover, the record reveals that this assumption underpinning the AT&T position -- that soft switch costs are non-traffic sensitive -- is simply wrong. The more traffic a carrier needs to terminate, the more switch ports are needed, and the more ports are needed, the more softswitch

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[26] Ankum Declaration, at ¶¶ 38-39.

[27] AT&T Comments, at 14.

components/facilities are needed, and the higher the carrier's total costs for terminating traffic.[28] The assertion that the costs of shared trunk ports are non-traffic sensitive is startling as to QSI's knowledge such costs have never been treated as non-traffic sensitive in a state or federal cost proceeding.[29]

Last but not least, to our knowledge, AT&T has never advanced the use of soft switches in any state cost proceeding concerning *its own* switching related costs. In fact, in a recent proceeding in Connecticut concerning AT&T's reciprocal compensation and transit costs,[30] AT&T witnesses testified that it would be inappropriate to base switching costs on soft switches[31] because (1) AT&T has not deployed soft switches[32] and (2) has no plans to deploy

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[28] Ankum Declaration, at 58; Embarq Comments at 49 ("The deployment of a soft switch as mentioned above would require the addition of several network components [the soft switch processor, IP switches, routers, firewall, session border controller and media gateways] all of which are sensitive to traffic volumes and result in significant additional costs. The transport network itself would have to be upgraded if carriers moved to soft switch architecture. Not only would more traffic be placed on the data network, which would require more resources, every element in the data network would have to be upgraded to provide redundancy, security, and to handle quality of service requirements."); NuVox Reply Comments, at ¶¶ 28-29.

[29] In the Matter of High-Cost Universal Service Support, et al., WC Docket Nos. 03-109, 04-36, 05-337, 06-122, and 07-135, CC Docket Nos. 96-45, 96-98, 99-200, and 01-92, Declaration of August H. Ankum, and Olesya Denney on Behalf of PAETEC, at ¶¶ 32-33, 39 (Nov. 26, 2008) ("QSI Nov Declaration").

[30] *DPUC Investigation Into AT&T Connecticut's Cost of Service Re: Reciprocal Compensation and Petition of Pocket Communications for Declaratory Ruling Re: Transit Traffic Prices and Transit Traffic Factor,* State of Connecticut Department of Public Utility Control, Docket Nos. 09-04-21/08-12-04.

[31] AT&T advocates against use of softswitches in cost studies: "AT&T Connecticut's forward-looking approach to network equipment assumed the use of digital circuit switches only, which are the only type of switches AT&T Connecticut plans to use for voice traffic in the foreseeable future. Mollet Testimony at 5. Some parties, however, contend that AT&T Connecticut should have assumed a network composed entirely of "softswitches." Benedict Testimony at 24[1]; Farrar Testimony at 12, 23-24.[2] A softswitch is a type of specialized packet switch. The Department should reject this proposal because it is inconsistent with TELRIC and its own prior decisions on forward-looking equipment." Public Initial Brief of the Southern New England Telephone Company (AT&T-Connecticut), November 18, 2009 at 8-9. *DPUC Investigation Into AT&T Connecticut's Cost of Service Re: Reciprocal Compensation and Petition of Pocket Communications for Declaratory Ruling Re: Transit Traffic Prices and Transit Traffic Factor,* State of Connecticut Department of Public Utility Control, Docket Nos. 09-04-21/08-12-04.

[32] "AT&T Connecticut has no softswitches in its current network and has no plans to deploy or use softswitches for voice traffic. Hamiter Testimony at 22; Tr. 44-45, 103, 176 (Hamiter); Interrogatories TE-14, TE-15, and TE-16." See Public Initial Brief of the Southern New England Telephone Company (AT&T-Connecticut), November 18, 2009 at 9. *DPUC Investigation Into AT&T Connecticut's Cost of Service Re: Reciprocal Compensation and Petition of Pocket Communications for Declaratory Ruling Re: Transit Traffic Prices and Transit Traffic Factor,* State of Connecticut Department of Public Utility Control, Docket Nos. 09-04-21/08-12-04.

soft switches. This is true not just in AT&T's network in Connecticut but also its nationwide network.[33]

In sum, lower switch utilization rates, combined with lower customer densities for small companies compared to BOCs mean fewer scale economies, lower purchasing power when dealing with equipment vendors, larger interoffice distances, and as a result, significantly higher transport and termination cost than the BOCs' costs. Consequently, if a statewide uniform transport and termination rate is adopted, BOCs would over-recover, and other companies would under-recover their respective costs.[34] Indeed, QSI estimates that "the direct impact of the proposed changes to intercarrier compensation rates would be a combined *$9.9 billion reduction in annual usage-based intercarrier compensation revenues* for all local exchange carriers;" ILECs other than the RBOCs would lose an estimated 18% of their terminating revenue."[35]

Although the Joint Commenters believe that intercarrier compensation rates should be based on an individual carrier's forward looking costs, implementation of safe harbor benchmarks is an acceptable approach provided the benchmarks are reasonable. As the declaration of Michael Starkey, QSI Study and other data confirms, if a benchmark is set for termination rates, neither AT&T nor Verizon provide a reasonable benchmark for CLECs. Rather, based on similarities in network, scale economies and other cost related factors, CLECs should be benchmarked to mid-size incumbent LECs.

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[33] Tr. at 44-45. See also, AT&T-CT's response to SPT-AT&T-2-20 ("(a) AT&T does not have any soft switches in operation in the AT&T 22-state. (b) No. The AT&T 22-State Network Planning and Engineering group has not considered the installation of soft-switches in the 22-state region. (c) No. AT&T has not considered the installation of soft-switches in Connecticut.") *DPUC Investigation Into AT&T Connecticut's Cost of Service Re: Reciprocal Compensation and Petition of Pocket Communications for Declaratory Ruling Re: Transit Traffic Prices and Transit Traffic Factor*, State of Connecticut Department of Public Utility Control, Docket Nos. 09-04-21/08-12-04.

[34] Ankum Declaration, at ¶¶ 34-46.

[35] Ankum Declaration, at ¶¶ 9, 12, 14-18, 22, 28.

Assuming that Lost Intercarrier Compensation Revenues Must Be Recovered from Other Sources Could Balloon the USF and Detract from Broadband Deployment

Under proposals submitted by AT&T and Verizon in CC Docket 01-92, the RBOCs and certain other ILECs are protected from any shortfall in revenues by new make-whole mechanisms implemented within a revised Universal Service Fund ("USF").[36] Even AT&T's and Verizon's estimates of the increased USF support required under their plans range up to $1.8 billion.[37] Other estimates foresee even greater required increases in the USF amounting to an estimated $5.1 billion annually if both price cap and rate of return carriers are compensated for revenue shortfalls and about $2.7 billion annually if only non-RBOC ILECs are compensated.[38] If the additional USF cost were $1.8 billion annually, and their plan was in place today, the fourth quarter contribution factor would be 15.4% rather than 12.3%.[39] Add this 3.1% increase in the USF contribution factor to the higher subscriber line charges ("SLCs") contemplated by the AT&T/Verizon plan and end users would take a significant hit in their monthly bills at a time when this country faces one of the most severe recessions in its history.[40]

The staggering increase in USF contributions imposed on end users to fund two of the largest, most profitable companies in the country to deploy more broadband facilities is an untenable result. If the Commission chooses this path, CLECs (and their end users) must have access to the last mile bottleneck facilities funded with USF contributions made by end users of CLECs and others, including access to both copper facilities and new fiber installations such as

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[36] AT& T Comments, at 5; Verizon Comments, at 42-43.

[37] *See*, Letter from Brian Benison, Director, Federal Regulatory, AT&T to Marlene H. Dortch, Secretary, FCC, Docket Nos. 01-92, 05-337, 96-45, 99-68 & 07-135, at Attachment, p. 8 (Sept. 12, 2008).

[38] Ankum Declaration, at ¶¶ 27-29.

[39] Proposed Fourth Quarter 2009 Universal Service Contribution Factor, CC Docket No. 96-45, DA 09-2042, at 3 (rel. Sept. 14, 2009).

[40] The FNPRM proposes increasing the SLC cap by $1.50 for residential and single line business lines and by $2.30 for multi-line business lines. Ankum Declaration, at ¶¶ 25, 27-28.

FiOS. Of course, AT&T and Verizon simply want CLEC end users to fund their broadband networks but never have the option to benefit from it – unless they agree to become customers of AT&T and Verizon.

A recent broadband study[41] conducted by Harvard's Berkman Center for Internet and Society study ("*Berkman Study*") supports this point.[42] The *Berkman Study* is based on a careful examination of broadband developments and policies in some thirty member countries of the Organization for Co-Operation and Economic Development ("OECD"). Among a number of other objectives, the *Berkman Study* evaluates the impact of making incumbent carriers' broadband networks open to use by their competitors, wherein such "open access" may encompass unbundling, bitstream access, collocation requirements, wholesaling, and/or functional separation.[43] Based on its cross-country analysis, the *Berkman Study* finds a positive linkage between adoption of ***open access policies on the one hand and greater availability, affordability, and capacity of broadband services on the other, as open access expands competitive supply and innovation***.[44]

4.h. The Commission seeks to understand how intercarrier compensation payment flows may impact broadband deployment incentives and how any intercarrier compensation reform may alter or change such incentives. We are particularly interested in factual information or data that addresses the question of how the current intercarrier compensation system either supports or inhibits broadband deployment, rather than conclusory assertions that intercarrier compensation should be reformed. Accordingly, the following information is requested:

i. Entities that pay or receive intercarrier compensation should submit data on their total intercarrier compensation minutes of use, payments and revenues for the last 3-5 years in the aggregate as well as separating terminating traffic into three categories: intrastate access, interstate access and reciprocal compensation. Responses should separate originating access revenues and payments from terminating access revenues and payments, and identify net payments.

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[41] *http://www.fcc.gov/stage/pdf/Berkman_Center_Broadband_Study_13Oct09.pdf.*

[42] *Comments Sought on Broadband Study Conducted by the Berkman Center for Internet and Society,* NBP Public Notice # 13, Pleading Cycle Established, GN Docket Nos. 09-47, 09-51, 09-137.

[43] *Berkman Study* at 11.

[44] *Id. at* 12 and Chapter 4.

As an initial matter, Joint Commenters note that CLECs are not required to and do not follow the Uniform System of Accounts or USOA or many of the other regulatory accounting practices used by ILECs. Therefore, in many cases, the Commission may not be able to draw accurate comparisons from ILEC data vis-à-vis CLEC data. For example, many CLECs charge the same rate for originating and terminating access, and therefore do not keep records to differentiate between the two. Notwithstanding these differences, TelePacific has provided highly confidential minute of use data in **Exhibit 3**.[45]

The data demonstrates that intercarrier compensation revenues are an important component of the business plan. Terminating revenues are also critical to non-RBOC ILECs and other carriers as well as CLECs. QSI estimates that if the proposal in the FNPRM implementing a uniform non-cost based terminating rate of $0.0007 per minute were adopted, the non-RBOC ILECs would lose approximately 18% of their terminating revenue, amounting to approximately $12.56 per line per month.[46]

In light of the current macro-economic climate, the Commission must balance the desire for reform against the risk of massive financial disruption in the industry and to the many end users that already face job losses and difficult economic circumstances. The FCC, in partnership with the states, should establish cost-based, benchmark rates for difference classes of LECs and allow the industry ample time to transition to the benchmark rates. Carriers need time to adjust their business plans, renegotiate agreements, and modify operations to identify and implement alternative means of covering any revenues lost during a transition to benchmark rates. While the length of the transition may vary by state, in part based on the difference between existing

[45] PAETEC is currently undergoing a billing system transition and was not able to pull the data necessary to provide the information requested in the Public Notice given the short comment deadline. PAETEC will file relevant information as soon as it is able to do so.

[46] Ankum Declaration, at ¶¶ 15-21.

rates and the benchmark rates, Joint Commenters estimate that four to five years would, on average, provide carriers time to transition to benchmark rates.

ii. Identify total intercarrier compensation revenues as a percentage of total revenues (total regulated revenues and as a percentage of overall revenues). Identify total intercarrier compensation expenses as a percentage of total expenses (total regulated expenses and as a percentage of overall expenses). Responses should explain any assumptions and any response should include both revenues and expenses.

iii. Identify the portion of total intercarrier compensation terminating intrastate, interstate, and reciprocal compensation traffic that is subject to dispute due to issues or concerns over the proper classification or jurisdiction of the traffic and billing and record issues. Responses should quantify the amount of disputed traffic as a dollar amount or percentage of the total intercarrier compensation traffic either by entity, groups of entities or for the entire industry.

The RBOCs often use their monopsony powers and exploit vague orders to engage in self-help, dispute the jurisdiction and compensation due for traffic delivered by or to CLECs, and extract unwarranted concessions. The RBOCs are not alone, however. Many carriers refuse to pay CLECs any compensation whatsoever for the termination functions they provide. These refusals may be based on the lack of a formal traffic exchange agreement (notwithstanding the fact that the originating carrier refuses to negotiate one), an alleged "bill and keep" arrangement in any traffic exchange between CLECs and non-ILECs, self-help in paying what the originating carrier believes is a fair rate, or outright refusals to pay.[47] For example, one of the Joint Commenters determined that over the past 11 months, including wireless-originated traffic, approximately 33 percent of its total intercarrier compensation billings were uncollected.[48] While some carriers simply refuse to pay or short-pay, the percentage of disputes was substantially

[47] *CLEC Access Charge Order*, at ¶¶ 23-24 ("The IXC's primary means of exerting pressure on CLEC access rates has been to refuse payment for CLEC access services. Thus, Spring has unilaterally recalculated and paid CLEC invoices for tariffed access services based on what it believes constitutes a just and reasonable rate. AT&T, on the other hand, has frequently declined call together to pay CLEC access invoices that it views as unreasonable. We see these developments as problematic for a number of reasons . . . the uncertainty of litigation has created substantial financial uncertainty for parties on both sides of the dispute. *This uncertainty, in turn, poses a significant threat to the continued development of local-service competition, and it may dampen CLEC innovation and the development of new product offerings*") (emphasis added).

[48] *See*, **Exhibit 3**.

higher, however for intraLATA toll, Section 251(b)(5), and wireless-originated traffic. In short, jurisdiction and regulatory classification of traffic are not the only problems with the current system. Another major problem is the fact that many carriers believe they are free to refuse payment for Section 251(b)(5) traffic unless and until a regulatory body orders otherwise. Even a tariffed switched access rate approved by a state PUC for both interLATA and intraLATA switched access is apparently insufficient authority to require payment. Excuses include outright refusal to pay, customer arbitrarily reducing tariffed rate to pay what it believes is reasonable, providers refusing to pay access even when calls are delivered over Feature Group D trunks, and CMRS carriers refusing to enter into traffic exchange agreements at the same time they claim interMTA calls are subject to Section 251(b)(5) compensation.

The Joint Commenters have invested substantial amounts to ensure proper billing. For example, TelePacific has two veteran telecom employees dedicated to resolving disputes about intercarrier compensation (both paid and received). These investments and the systems used to bill intercarrier compensation would be substantially simpler if Joint Commenters did not have to track and classify traffic based on artificial regulatory constructs such as "local," intraMTA, intraLATA toll, intrastate interLATA toll, and interstate toll.

The FCC has long prohibited carriers from engaging in "self-help," finding that "a customer, a competitor, is not entitled to the self-help measure of withholding payment for tariffed services duly performed but should first pay, under protest, the amount allegedly due and then seek redress if such amount was not proper under the carrier's applicable tariffed charges and regulations."[49] Notwithstanding the FCC's long-standing prohibition, large carriers and

[49] *See, e.g.*, Establishing Just and Reasonable Rates for Local Exchange Carriers, Call Blocking by Carriers, Declaratory Ruling and Order, 22 FCC Rcd 11629, ¶ 1 (Wireline Comp. Bur. 2007) ("FCC Call Blocking Order") (citing Sections 151 and 254 of the Communications Act); Brooten v. AT&T Corp., 12 FCC Rcd 13343 at

IXCs continue to withhold access payments as leverage to force CLECs into accepting lower rates or exact other concessions. For example, AT&T began withholding all access payments to McLeodUSA shortly after the FCC adopted a transition period to bring CLEC interstate access rates down to ILEC levels in the *CLEC Access Charge Order*.[50] By withholding all access charge payments, AT&T forced McLeodUSA to enter into an access service agreement and settlement whereby McLeodUSA "agreed" to bill AT&T both interstate and intrastate access rates at ILEC rate levels, which was well below tariffed rate levels, prior to the transition benchmark period established by the FCC. AT&T improperly extracted this concession by refusing to pay McLeodUSA for access services until McLeodUSA had signed the agreement and settlement.[51] MCI engaged in the same strategy to force a similar settlement. The IXCs were able to force McLeodUSA into a settlement by choking off a material amount of its cash flow, thereby contravening the reasonable policy adopted by the FCC. The TelePacific companies experienced similar improper efforts by AT&T and MCI to extract concessions.

Given the large IXCs' repeated failures to heed FCC findings that self-help is an unreasonable practice and violation of Section 201(b), the Commission must make clear that carriers may not refuse to pay competitors for lawful charges, engage in traffic discrimination, or undertake any other practices designed to force competitors to transition to lower rates sooner than required by the FCC or state commission. In fact, to add teeth to the prohibition on self-

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n.53 (Common Car. Bur. 1997) (citing MCI Telecommunications Corp., 62 F.C.C.2d 703, 705-706 (1976)); MCG Communications, Inc. v. AT&T Corp., Memorandum Opinion and Order, 14 FCC Rcd 11,647 (Comm. Car. Bur. 1999), affd., 15 FCC Rcd 308 (1999) (AT&T's failure to pay for those tariffed interstate access services was found to be impermissible self-help and a violation of section 201(b).).

[50] *CLEC Access Charge Order*, at ¶¶ 37, 45, 52-;47 C.F.R § 61.26.

[51] Joint Reply Comments of PAETEC Communications, Inc., Citynet, LLC, Granite Telecommunications, Inc., RCN Telecom Services, Inc., and U.S. TelePacific Corp., *Developing a Uniform Intercarrier Compensation Regime et al.*, CC Docket Nos. 01-92, 99-68, 96-98, 99-200, 96-45, WC Docket Nos. 05-337, 03-109, 06-122, 04-36, 7-135, at 27-28 and Exhibit 1, Reply Declaration of William A. Haas, at ¶¶ 4-7 (Dec. 22, 2008) ("Joint Reply Comments").

help, the Commission should adopt a base forfeiture for self-help violations by customer-competitors, as it has done for failures to pay required universal service contributions, unauthorized changes of preferred interexchange carriers, and other anti-competitive practices.[52]

Verizon not only resists any such measures intended to sanction its use of self-help, it has called for the Commission to sanction its abuse of market power through self-help practices by arguing that: "Any new terminating rate regime established by the Commission should be a default regime only -- carriers ***should be free*** to negotiate commercial agreements that may depart from the default regime."[53] Such negotiations only work when parties have relatively equal bargaining power which is clearly not the case in the access market.[54] Rather than sanction self-help and the exercise of market power, the Commission should make clear that any attempt through self-help to force LECs to accelerate the transition to lower rates will be dealt with in a prompt manner and punished by significant forfeitures that will deter such anti-competitive conduct.

As demonstrated in section 4(a) above, terminating rates must be cost-based and carrier-specific to ensure all carriers recover their costs. In fact, multiple rates for the same termination function that vary based on the type of technology (CMRS, wireline, or VoIP), or jurisdiction (local or long distance) are not cost-based and create billing, measurement, and tracking problems that inevitably result in short payments and a growth in disputes. Even AT&T

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[52] *See* 47 C.F.R. § 1.80; Telrite Corporation, Apparent Liability for Forfeiture, Notice of Apparent Liability for Forfeiture and Order, File No. EB-05-IH-2348, NAL/Acct. No. 200832080084, ¶¶ 14, 24-25 (rel. Apr. 17, 2008); Horizon Telecom, Inc., Apparent Liability for Forfeiture, File No. EB-07-TC-4006, NAL/Acct. No. 200832170013 (rel. Feb. 29, 2008) (fining Horizon $5,084,000 for slamming and other violations).

[53] Verizon Comments, at 47.

[54] For example, Integra has shown that commercially negotiated agreements for Qwest's Local Switching (which followed the FCC's elimination of the unbundling requirements for local switching) resulted in local switching rates that significantly exceed cost. Specifically, the commercial rates constitute 162% of cost on average for Qwest's 14-state territory, and are as high as 210% in the state of Washington and 191% in Minnesota. Integra Comments, at 11 (Nov. 26, 2008).

recognizes that its concerns with "traffic pumping" and other issues arise because access charges are not aligned with actual carrier costs.[55] Moving to cost-based rates will reduce the overall level of disputes and preclude most of the alleged arbitrage that are the focus of RBOCs complaints. In short, the simple solution for any problems that emerge because rates are out of alignment with costs is to bring rates into alignment with costs.

CONCLUSION

The Joint Commenters applaud the Commission for seeking information about the impact of intercarrier compensation rates on broadband deployment to account for them in development of the National Broadband Plan. As discussed herein, terminating rates that enable all providers, including CLECs, to recover their carriers-specific costs are essential for the delivery of robust broadband services to end users.

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Dated: December 7, 2009

[55] AT&T Comments, at 6; Ankum Declaration, at ¶¶ 87-92.

EXHIBIT 1

STATE	LOCAL SWITCHING RATE	TANDEM SWITCHING RATE	10-MILE COMMON TRANSPORT	TOTAL STATE RATE	TOTAL TRANSIT RATE
Alabama	$0.0007025	$0.0001000	$0.0003224	$0.00112490	$0.0004224
Alaska	$0.0065950	$0.0047120	$0.0002300	$0.01153700	$0.0049420
Arizona	$0.0009695	$0.0005500	$0.0008236	$0.00234310	$0.0013736
Arkansas	$0.0025300	$0.0007890	$0.0001960	$0.00351500	$0.0009850
California	included in port rate	$0.0004530	$0.0012490	$0.00170200	$0.0017020
Colorado	$0.0016100	$0.0006900	$0.0011100	$0.00341000	$0.0018000
Connecticut	included in switching rate	$0.0061100	no data provided	$0.00611000	$0.0061100
District of Columbia	$0.0030000	$0.0025320	$0.0000500	$0.00558200	$0.0025820
Delaware	$0.0025070	$0.0006688	$0.0000200	$0.00319580	$0.0006888
Florida	$0.0007662	$0.0001319	$0.0004372	$0.00133530	$0.0005691
Georgia	$0.0006153	$0.0000972	$0.0001914	$0.00090390	$0.0002886
Hawaii	$0.0076074	$0.0012572	$0.0002710	$0.00913560	$0.0015282
Idaho	$0.0013430	$0.0006900	$0.0011100	$0.00314300	$0.0018000
Illinois	included in port rate	$0.0002150	$0.0003040	$0.00051900	$0.0005190
Indiana	included in port rate	$0.0002950	$0.0005130	$0.00080800	$0.0008080
Iowa	$0.0015580	$0.0006900	$0.0011100	$0.00335800	$0.0018000
Kansas	$0.0025300	$0.0007980	$0.0001960	$0.00352400	$0.0009940
Kentucky	$0.0011970	$0.0001940	$0.0007466	$0.00213760	$0.0009406
Louisiana	$0.0018680	$0.0001067	$0.0003748	$0.00234950	$0.0004815
Maine	$0.0016800	$0.0019400	no data provided	$0.00362000	$0.0019400
Maryland	$0.0013250	$0.0002480	$0.0013410	$0.00291400	$0.0015890
Massachusetts	$0.0008250	$0.0000430	$0.0002680	$0.00113600	$0.0003110
Michigan	included in port rate	$0.0001980	$0.0008300	$0.00102800	$0.0010280
Minnesota	included in port rate	$0.0011200	$0.0006130	$0.00173300	$0.0017330
Mississippi	$0.0010269	$0.0001723	$0.0004541	$0.00165330	$0.0006264
Missouri	$0.0028070	$0.0012310	$0.0002460	$0.00428400	$0.0014770
Montana	$0.0015740	$0.0006900	$0.0011100	$0.00337400	$0.0018000
Nebraska	$0.0012600	$0.0006900	$0.0011100	$0.00306000	$0.0018000
Nevada	$0.0016100	$0.0017100	$0.0072700	$0.01059000	$0.0089800
New Hampshire	$0.0031990	$0.0006840	$0.0005650	$0.00444800	$0.0012490
New Jersey	$0.0013990	$0.0007720	$0.0000060	$0.00217700	$0.0007780
New Mexico	$0.0025180	$0.0008530	$0.0012730	$0.00464400	$0.0021260
New York	$0.0011470	$0.0004810	$0.0002030	$0.00183100	$0.0006840
North Carolina	$0.0015000	$0.0006000	$0.0003400	$0.00244000	$0.0009400
North Dakota	$0.0014750	$0.0006900	$0.0011100	$0.00327500	$0.0018000
Ohio	$0.0007790	$0.0002130	$0.0006290	$0.00162100	$0.0008420
Oklahoma	$0.0038000	$0.0009560	$0.0004990	$0.00525500	$0.0014550
Oregon	$0.0013301	$0.0006900	$0.0010400	$0.00306010	$0.0017300
Pennsylvania	$0.0013730	$0.0001200	$0.0001000	$0.00159300	$0.0002200

Rhode Island	$0.0013580	$0.0002740	$0.0002910	$0.00192300	$0.0005650
South Carolina	$0.0010519	$0.0001634	$0.0004095	$0.00162480	$0.0005729
South Dakota	$0.0007020	$0.0001634	$0.0013879	$0.00225326	$0.0015513
Tennessee	$0.0008041	$0.0009778	$0.0003800	$0.00216190	$0.0013578
Texas	$0.0021160	$0.0007940	$0.0001440	$0.00305400	$0.0009380
Utah	$0.0017980	$0.0006940	$0.0010390	$0.00353100	$0.0017330
Vermont	$0.0040030	$0.0009210	$0.0006300	$0.00555400	$0.0015510
Virginia	$0.0026430	$0.0005480	$0.0001140	$0.00330500	$0.0006620
Washington	$0.0011780	$0.0006900	$0.0007600	$0.00262800	$0.0014500
West Virginia	$0.0025860	$0.0002394	$0.0006700	$0.00349540	$0.0009094
Wisconsin	included in port rate	$0.0002290	$0.0004850	$0.00071400	$0.0007140
Wyoming	$0.0009200	$0.0006900	$0.0011100	$0.00272000	$0.0018000
			50 State Average -	***$0.00318499***	***$0.0015147***
				AVG. TOTAL RATE	***AVG. TRANSIT RATE***

(1) The data from this table was derived from West Virginia PUCs Consumer Advocate Division's: A SURVEY OF UNBUNDLED NETWORK ELEMENT PRICES IN THE UNITED STATES (Updated March 2006). Table 1 - *Unbundled Network Element Rate Comparison Matrix*, accessed at http://www.cad.state.wv.us/March06UneSurvey.htm.

(2) In instances where the common transport rates were published per mile, a 10-mile baseline was used to calculate the common transport rate.

(3) The Switching, Tandem Switching and Common Transport Rates are listed per MOU

EXHIBIT 2

Declaration of Michael Starkey
Exhibit 2

QSI Policy Analysis

Document Number: 052008A

EXCHANGE ACCESS RATES FOR COMPETITIVE LOCAL EXCHANGE CARRIERS

A Basis for Economically Rational Pricing Policies

August 2008

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NOTE

The views and opinions expressed in this report are solely those of QSI Consulting, Inc., and are not intended to reflect the views of any other party.

QSI Consulting, Inc. is a consulting firm specializing in traditional and non-traditional network industries, econometric analysis, technology convergence and computer-aided modeling. QSI's consultants provide services to a wide array of clients, including multi-billion dollar telecommunications firms, small start-up companies, state legislatures and regulatory agencies.

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ATTACHMENTS

Clearly, the "competitive rate level" for exchange access services sought by advocates of benchmarking policies does not exist with respect to large ILECs exchange access rates. Therefore, to require CLECs to benchmark their rates against the hodge-podge of ILEC rates would not bring the industry any closer to "competitive" exchange access rates; rather it would simply require CLECs to mirror the same hodgepodge that exists today without any discernable benefit.

ii. CLECs Are Not In a Position to Reject IXC Traffic

Those who advocate benchmarking policies based on the notion that competitive markets impose uniform price levels also overlook that CLECs are *obligated* to accommodate the IXCs' exchange access traffic.[76] In competitive markets, companies generally have the option to scale back their sales and market share when price is not compensatory, which is not the case for CLECs in exchange access markets. CLECs have no choice but to accommodate the IXCs' exchange access traffic – whether or not the CLEC is being fairly compensated. Of course, CLECs can scale back their overall presence in an ILEC's territory, in which case they would not need to accommodate as much IXC traffic. However, this dynamic gives the large ILECs that have long distance affiliates (such as AT&T and Verizon) control over their retail competitors, the CLECs, by leveraging their monopsony power in wholesale markets. That is, by withholding payments for wholesale exchange access traffic, companies such as AT&T and Verizon are able to handicap CLECs in their ability to compete in retail markets. This corrosive dynamic, which is reinforced with benchmarking policies, undermines the retail competition that public policy has sought to foster since the passage of Telecom Act.

In any event, it is inconsistent to require benchmarking of CLEC exchange access rates based on the notion that it emulates a competitive market – i.e., *meet the market price or leave* – while at the same time obligating CLECs to accommodate the IXCs' traffic, irrespective of whether prices are compensatory.

VI. WHOLESALE RATES SHOULD BE COMPENSATORY: CLECS AND LARGE ILECS ARE DIFFERENTLY SITUATED AND HAVE DIFFERENT WHOLESALE COSTS

A one-size-fits-all approach inherent in benchmarking policies is inconsistent with standing regulatory policies that consider individual company costs in

[76] Irrespective of whether a CLEC has a legal obligation to terminate or originate long distance traffic on behalf of IXCs, here our concern is the real-world option of CLECs to reject IXC traffic – an option that does not exist, especially with respect to the largest IXCs. No CLEC could compete effectively if its end users were unable to receive calls from the nations' largest IXCs – indeed, anywhere from 60% to 80% of all calls to the CLEC's end users would not be completed.

> *setting wholesale rates: switched access rates vary from state to state and from company to company, and so do wholesale UNE rates. In the event it is determined that regulatory intervention is needed to cap CLEC access rates, wholesale rates should be set based on considerations of individual company costs not on some arbitrary benchmark. Capping CLEC exchange access rates at levels set for the world's largest, vertically and horizontally integrated ILECs is unfair and bad public policy.*

A. The Touchstone for Just and Reasonable Rates is Cost

It is standard practice in public utility regulation to either explicitly or implicitly examine rate-setting practices against the backdrop of the regulated firm's costs. This is true whether the discussion concerns traditional rate of return regulation or other forms of regulation. As the United Supreme Court noted:

> The enduring feature of ratesetting from *Smyth v. Ames* to the institution of price caps was the idea that calculating a rate base and then allowing a fair rate of return on it was a sensible way to identify a range of rates that would be just and reasonable to investors and ratepayers. [77]

When rates are set below costs, it may lead to under-recovery and cross-subsidies or constitute such anti-competitive practices as predation. When rates are set too high, it may lead to over-recovery of costs and represent an exercise of market power. Generally, economists advocate that rates be set at costs to provide the appropriate price signals and to prevent other distortions. The rare exception to this rule is when regulators have other pressing public policy concerns, such as the pursuit of universal service.[78]

For the better part of the twentieth century, much of public utility regulation, and certainly the regulation of telecommunications utilities, involved traditional rate-base/cost-of-service regulation. While allocations of costs across various customer classes and jurisdictions (such as intrastate and interstate) might have been impacted by universal service policies, the ultimate basis for rates and revenues was costs. Even as telecommunications regulation moved away from traditional rate-base regulation in the latter part of the twentieth century, the FCC continued to emphasize costs as the relevant benchmark for just and reasonable rates. The notion that costs have been and remain the ultimate benchmark for just and reasonable rates is generally recognized and is evinced by such FCC statements as:

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77 *See Verizon v. FCC*, 535 U.S. at 487-88.

78 Prior to the Act, state commissions deliberately set some rates above cost in order to keep rates for basic local telephone service low, particularly in areas such as rural areas where costs are high. The Act eliminated such implicit subsidies and required that the FCC establish an explicit funding mechanism. Some states have established an explicit funding mechanism to support universal service.

> The Communications Act requires that rates be just and reasonable and not create unreasonable discrimination or undue preference. Section 201(b) and 202(a), 47 U.S.C. §§ 201(b), 202(a). [...] ***Costs are traditionally and naturally a benchmark for evaluating the reasonableness of rates.***[79]

About a decade later, after the passage of the Telecommunications Act of 1996, the FCC reiterated the identical notion and language:

> [C]osts are traditionally and naturally a benchmark for evaluating the reasonableness of rates under Section 201(b) of the Act.[80]

The linkage of costs with just and reasonable rates typically runs through FCC orders involving rate setting issues, particularly where it concerns carriers accessing one another's facilities. For example, in its 1997 *Expanded Interconnection Order*, the FCC, in line with its long standing tradition, again established costs as the appropriate benchmark for just, reasonable and nondiscriminatory rates:

> It is clear that the success of efficient competitive entry through interconnection depends on the interconnectors' ability to obtain access to the LEC's transmission facilities ***at rates that reflect costs*** under terms, and conditions that are ***just and reasonable***. Pursuant to sections ***201 through 205*** of the Communications Act of 1934 ... we are using the tariff review process to ensure that LECs provide interstate expanded interconnection service at rates, terms and conditions that are just, reasonable and nondiscriminatory.[81]

The FCC's approach is consistent across various arenas of its jurisdiction. For example, in 2004, in evaluating whether rates charged by certain international carriers were "just and reasonable," the FCC again evaluated costs of providing the services:

> The Commission determined that ***above-cost settlement rates*** paid by U.S. carriers to terminate international traffic are neither ***just nor reasonable***, and it acted pursuant to its statutory authority in Section 201(b) of the Communications Act to prohibit U.S. carriers from continuing to pay such charges.[82]

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79 *Investigation of Special Access Tariffs of Local Exchange Carriers*, Memorandum Opinion and Order, 4 FCC Rcd 4797, 4799, at ¶ 32 (1988) ("*Special Access Tariff Order*"). (emphasis added)

80 *In the Matter of INFONXX, Inc., Complainant, v. New York Telephone Co., Defendant.* Memorandum Opinion and Order, 13 FCC Rcd 3589, 3597, at ¶ 15 (1997).

81 *In the Matter of Local Exchange Carriers' Rates, Terms, and Conditions for Expanded Interconnection Through Physical Collocation for Special Access and Switched Transport*, Second Report and Order, 12 FCC Rcd 18730, 18733, at ¶ 2 (1997) ("*Expanded Interconnection Order*"). (emphasis added)

82 *In the Matter of International Settlements Policy Reform International Settlement Rates*, First Report and Order, 19 FCC Rcd 5709, 5742, ¶ 74 (2004). (emphasis added)

In a complaint case in 2001, the FCC also used costs as a benchmark for whether rates were just and reasonable:

> In this memorandum Opinion and Order, we examine, as requested by the court, whether or not the billing practices described in Count I of Plaintiffs' Third Amended Complaint are per se unjust and or unreasonable under Section 201(b). The factors we consider include ***the relationship of carrier costs to the billing charges*** or practices…[83]

The same is true in yet another complaint proceeding; as the FCC found:

> [T]he Commission considers three factors in determining whether a CMRS provider has ***violated section 201(b) of the Act:*** (1) the relationship of carrier ***costs to billing charges or practices***; (2) consumers' expectations based on wireline experience; and (3) the role of the competitive markets. (Emphasis added.) [84]

In sum, the FCC has well established that the term "just and reasonable" is inherently tied to costs.

The FCC has repeatedly referenced standard economic theory concerning the benefits of cost-based pricing policies. Going back almost two decades, a good example of how the FCC explained its cost-based pricing policies is the following:

> *Costs* are traditionally and naturally a benchmark for evaluating the *reasonableness of rates*, because cost based rates both deliver price signals which contribute to efficient use of networks and generally distribute network costs to the customer who causes those costs.[85]

In its *Local Competition Order*, the FCC again cited the signaling function of cost-based prices as the predominant reason for mandating the use of forward-looking incremental costs to set cost-based rates as required by section 252(d)(1) of the Act:

> We observed in the NPRM that ***economists generally agree*** that prices based on forward-looking long-run incremental costs (LRIC) give

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83 *In the Matter of Petition for Declaratory Ruling on Issues Contained in Count I of White v. GTE*, Memorandum Opinion and Order, 16 FCC Rcd 11558, 11560, ¶ 8 (2001). (emphasis added)

84 *In the Matter of Bruce Gilmore, Claudia McGuire, The Great Frame Up Systems, Inc., and Pesger, Inc., d/b/a The Great Frame Up v. Southwestern Bell Mobile Systems, L.L.C., d/b/a Cingular wireless*, Memorandum Opinion and Order, 20 FCC Rcd 15079, 15083, ¶ 11 (2005). (emphasis added)

85 *Special Access Tariff Order,* 4 FCC Rcd at 4799, ¶ 32. (emphasis added)

> ***appropriate signals*** to producers and consumers and ensure ***efficient entry and utilization*** of the telecommunications infrastructure.[86]

In short, the FCC has repeatedly recognized standard economic principles in supporting pricing policies that establish rates in close alignment with costs.

B. CLECs Do Not Have the Economies of Scale and Scope of Large ILECs and Will Generally Have Higher Per-Unit Costs

Regulators, such as the FCC, as well as entities such as the Universal Service Administration Company ("USAC"), have repeatedly recognized that CLECs and small ILECs have higher costs than other, larger incumbent carriers. Further, the FCC in its *CLEC Access Reform Order* provided a different standard for rural CLECs, noting that higher costs (in this circumstance as a result of rural subscribership) must be recognized within regulated rates.[87]

However, it is not the "rural" nature of the cost landscape that makes a network intrinsically high-cost; rather, it is the size and density of the network. And, even though many CLECs may operate in densely populated areas, the nature of their new entrant status generally implies that they serve relatively few customers that are geographically dispersed. In this aspect of their operations, they are much like rural carriers.

The relationship between *scale economies and costs* is well-recognized by the FCC:

> Fixed costs are the largest portion of the cost of a switch. The average cost of providing service to customers decreases as the number of customers served increases. As a general rule, we find that scale economies are more pronounced when switches operate at full utilization. Because incumbent LEC switches serve the majority of customers for local exchange service, they are likely to be able to take advantage of substantially greater economies of scale than the competitor would using its own switches.[88]

Another instance in which the FCC recognized the relationship between size and costs is the following:

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[86] *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, CC Docket No. 96-98, First Report and Order, 11 FCC Rcd 15499 (1996), ¶ 360 ("*Local Competition Order*"), aff'd in part and vacated in part sub nom. *Comp. Tel. Assoc. v. FCC*, 117 F.3d 1068 (8th Cir. 1997) and *Iowa Utils. Bd. v. FCC*, 120 F.3d 753 (8th Cir. 1997), aff'd in part and remanded, *AT&T v. Iowa Utils. Bd.*, 525 U.S. 366 (1999); on remand *Iowa Utils. Bd. v. FCC*, 219 F.3d 744 (8th Cir. 2000), reversed in part sub nom. *Verizon Communications, Inc. v. FCC*, 535 U.S. 467 (2002). (emphasis added)

[87] *CLEC Access Reform Order*, ¶ 65.

[88] *In the Matter of Implementation of the Local Competition Provisions of the Telecommunications Act of 1996,* CC Docket No. 96-98, Third Report and Order and Fourth Further Notice of Proposed Rulemaking, FCC 99-238, Rel. November 5, 1999, ¶ 258 ("UNE Remand Order").

> The Commission has recognized that smaller telephone companies have higher local switching costs than larger incumbent local exchange carriers (ILECs) because the smaller companies cannot take advantage of certain *economies of scale*.[89] (Emphasis added.)

Elsewhere, the FCC makes similar observations:

> We find that incumbent LECs retain material scale advantages with regard to provisioning and operating local circuit switches. Requesting carriers therefore will encounter generally greater direct costs per subscriber when provisioning their own switches, particularly in the early stages of entry when requesting carriers may not have the large number of customers that is necessary to increase their switch utilization rates significantly. *When we examine the market as a whole, we find that requesting carriers incur higher costs due to their inability to realize economies of scale using circuit switching equipment.*[90]

The higher switching costs incurred by CLECs has also been recognized in the universal service support context by the USAC. In specifying conditions for high cost support for competitive companies, the USAC notes:[91]

> Local Switching Support (LSS) is available to ***competitive carriers*** providing service in the areas of ***rural incumbent carriers*** serving 50,000 lines or fewer (mostly rate-of-return and some price-cap carriers) and designated as eligible telecommunications carriers (ETCs) by their state commissions or the Federal Communications Commission (FCC).
>
> [...]
>
> Local Switching Support is designed to help carriers recoup some of the high fixed switching costs of providing service to fewer customers. LSS helps keep customer rates comparable to more densely populated urban areas.

QSI has examined cost studies for the large ILECs in many states and has prepared cost studies for a number of CLECs. While we are generally unable to publicly divulge details of those studies due to confidentially agreements and concerns, we have filed public testimony demonstrating the substantial discrepancies between large ILECs and CLECs. For example, in a Texas proceeding, QSI provided the following:

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89 *National Exchange Carrier Assn., Inc. proposed Modifications to the 1998-99 Interstate Average Schedule Formulas*, Order, 13 FCC Rcd 24225, at n. 6.

90 FCC *UNE Remand Order*, ¶ 260. (emphasis added)

91 See, USAC website for competitive carriers: http://www.usac.org/hc/competitive-carriers/step01/local-switching-support.aspx

> It shows that AT&T Texas sells nearly 13 times more switched access minutes in a year than does McLeodUSA [in Texas]. In other words, in terms of the economies of scale between the two carriers related to this product alone, AT&T Texas dwarfs McLeodUSA. [...] It seems clear that if we were to include in the comparison above, the local calls switched by AT&T Texas, compared to the total minutes switched by McLeodUSA, the disparity would be even larger. The shear overall economies of scale (and scope – i.e. when services other than switched access are considered) make the two companies very poor "comparables" when evaluating their relative costs of producing switch-based services.[92]

Clearly, smaller carriers, such as CLECs, lack the economies of scale of large ILECs and, therefore, have generally higher per unit switching costs (recall that switching costs are a primary building block of exchange access services). Given that CLECs have higher per unit switching costs than large ILECs, it is unfair and likely confiscatory to cap CLEC exchange access rates at the level charged by large ILECs.

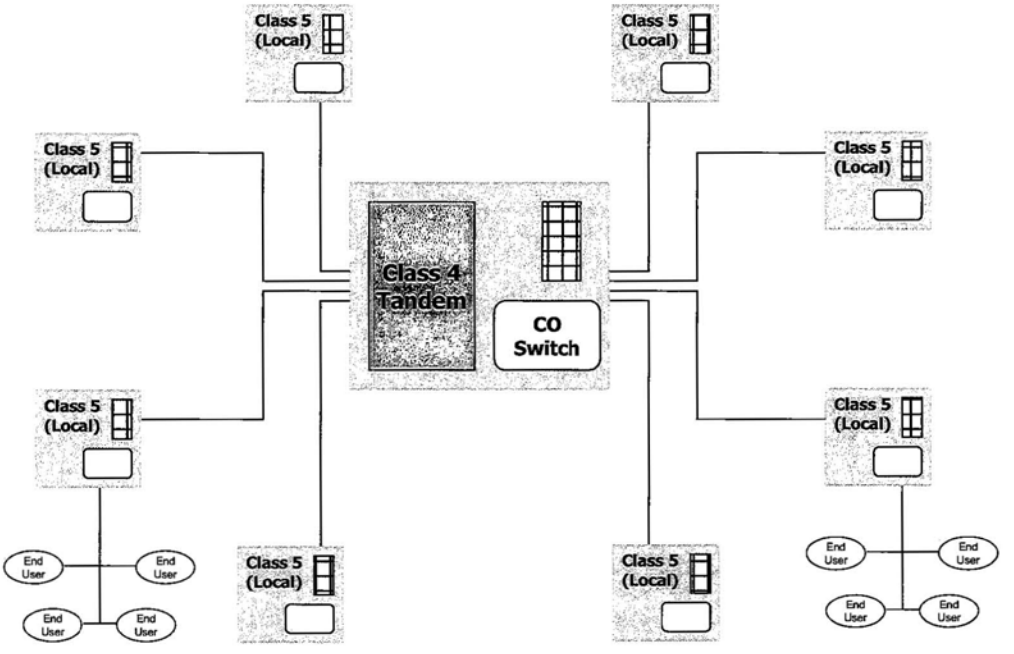
C. CLECs and ILECs Have Different Network Architectures and Thus Different Costs

CLECs typically enter the market with a distributed network architecture that is significantly different from that of the ILECs. Under this distributed architecture, CLECs tend to substitute longer transport routes for switching nodes and outside plant facilities, while at the same time providing origination/termination services throughout large geographic areas roughly comparable in size to areas served, for example, by ILEC tandem switches (which aggregate traffic from the ILEC's end office switches).

The diagrams below illustrate and compare the two different architectures. The first is the traditional distributed ILEC architecture that uses both Class 5 (end office) and Class 4 (tandem) offices to serve a specific geographic area.

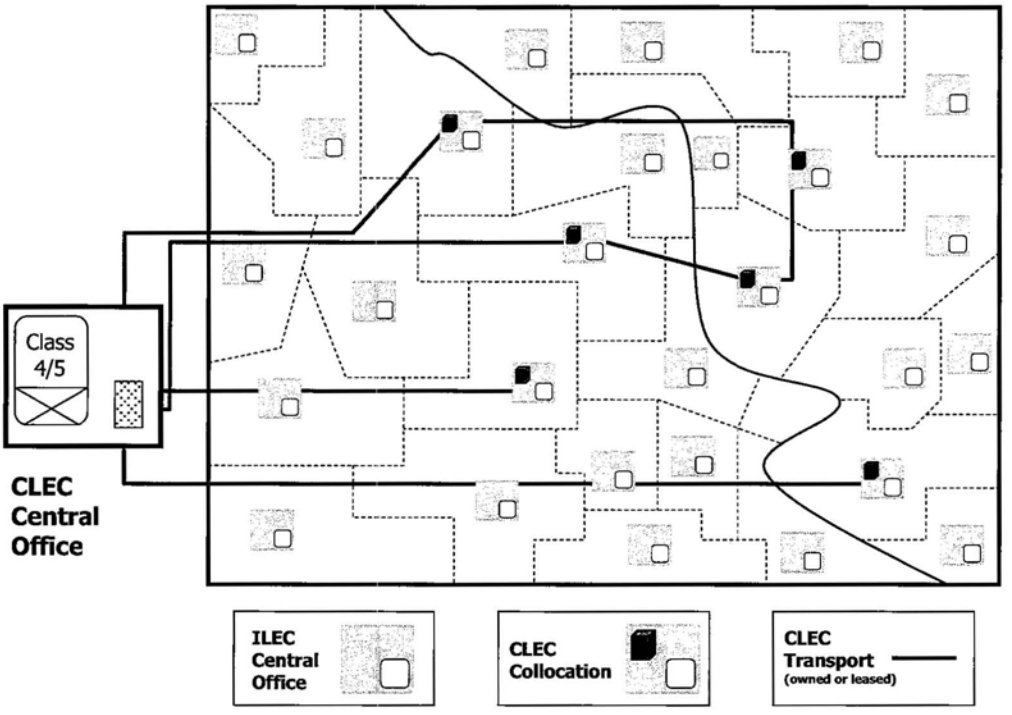
92 *Application of McLeodUSA Telecommunications Services, Inc., for Approval of Intrastate Switched Access Rates Pursuant to PURA Section 52.155 and PUC Subst. R. 26.223*, SOAH Docket. 473-07-1365, and PUC Docket No. 33545, Rebuttal Testimony of Michael Starkey, page 14.

ILEC Switch Hierarchy



The second represents a typical CLEC architecture that uses one switch to serve a comparable geographic area. The CLEC uses one switch for the same area as the ILEC because unlike the ILEC who serves the majority of the customers in the serving area, the CLEC can expect to serve only a fraction of all the customers in the area.

Distributed CLEC Network Design



CLECs generally deploy switches that provide a *combined* Class 5 (end office)[93] and Class 4 (tandem)[94] functionality (rather than switches that provide those functionalities on a stand-alone basis) and by means of a distributed architecture provide call origination and termination services across large geographic areas. By extending their switching and transport networks into collocated arrangements in multiple ILEC central offices, CLECs often are able to serve a customer base that is spread out across an entire state or LATA using a single, integrated end office and tandem switching platform.

The cost advantages of this architecture are that it minimizes the amount of switching and central office investment required to serve a more *dispersed customer base*, both by minimizing the number of Class 5 local switches required as well as reducing the need for a stand-alone tandem switch. However, the tradeoff is that this network architecture requires additional investments in transport and collocation. Given that most of the costs of these components are *traffic sensitive* costs, the CLEC network architecture will

[93] Class 5 (end office) switches typically aggregate the traffic of end user customers over end user loops, which terminate at the switch. They also provide the vertical features, such as call waiting, etc.

[94] Class 4 (tandem) switches are typically used to aggregate the traffic from end office switches and provide a point in the ILEC network at which IXCs can connect for terminating and originating long distance calls.

increase the *traffic sensitive costs* of inter-carrier traffic, which should be recognized in exchange access rates.

To properly explain differences in the costs of terminating and originating traffic between large ILECs (e.g., AT&T and Verizon) and CLECs, one should, at a minimum, consider the differences between the ILECs' and the CLECs' network architectures and cost structures. This type of inquiry was not performed by the FCC before establishing the benchmark for CLEC interstate exchange access rates, and any state regulator considering a benchmark for CLEC intrastate exchange access rates should not duplicate this error.

D. CLECs Generally Experience Lower Levels of Utilization for Switching and Transport Facilities

CLECs typically purchase large switches, such as a Lucent 5ESS or Nortel DMS500, capable of serving as many as one hundred thousand customers. Likewise, the SONET facilities constructed to transport traffic to end-users and other carriers are often capable of carrying huge volumes of traffic. Unlike ILECs, even efficient CLECs must deploy these facilities prior to having sufficient numbers of customers to achieve the utilization for which the facilities are designed. This means that, over much of their economic life, the utilization of CLEC facilities is substantially below full capacity, and below the utilization experienced by ILECs.

In contrast, when an ILEC installs or has installed a new digital switch, it does so to replace an old, existing analog switch that is already serving a large number of customers. In fact, old analog switches, such as the 1AESS, may serve tens of thousands of customers that may very well be comparable to the number of customers that a fully loaded digital switch serves (though the analog switch cannot provide the same functionalities). This means that from the moment the ILEC installs a digital switch, it will be able to achieve a higher rate of utilization relative to a new entrant.

The ILEC is also capable of achieving high utilization rates on existing digital switches in wire centers that are experiencing growth. In such situations, the ILEC will often grow the digital switch by installing additional switch modules in the same central office, or it will place remotes that are served by the existing host switch. In either case, the overall level of switch utilization will be high. The same is true for ILEC transport facilities. Here too, ILECs reap the benefit of having a mature network that serves a large, existing customer base so that new facilities can be added incrementally as new demand is anticipated to materialize.

This means that even though a CLEC may employ *optimally efficient*, state-of-the-art facilities, they are likely to experience *average utilization rates* – over the economic life of the facilities – below those experienced by the larger ILECs. This is an economic fact.

E. CLECs Share More Characteristics with Rural or Mid-tier ILECs than They Do with the Large ILECs

This section demonstrates that CLECs have far more in common with rural or mid-sized ILECs than they do with large ILECs, such as AT&T, Verizon or Qwest. In view of this, comparing CLEC exchange access rates to those of the vertically-integrated large ILECs in an attempt to determine whether CLEC exchange access rates are too high should be a non-starter. If any comparison is to be made to judge the reasonableness of CLEC exchange access rates, it would be more appropriate to compare CLEC rates to those of mid-sized and small ILECs.

i. CLECs Tend to Serve a Sparse Customer Base

By and large, CLECs operate and compete with large ILECs, such as AT&T and Verizon, in urban or suburban environments that are densely populated. However, while a high population density in these areas translates into a dense customer base for the large ILECs, the CLEC customer base is typically far more dispersed.

Once CLECs enter a particular geographic market, they tend to serve customers over an area that is roughly comparable to the local calling areas of the ILEC. However, due to their status as new entrants, among other factors, CLECs will only serve *a fraction* of the customers in these areas. Thus, if a CLEC's customer base is expressed on a customer-per-square mile basis, it is very sparse relative to that of the ILECs that serve the vast majority of customers in the same area.

While the nature of CLECs as new entrants to the market intuitively suggests that their customer density is lower than the customer density of the incumbents, actual empirical evidence is lacking because of the proprietary nature of the CLEC line count data. Although the FCC reports statewide line counts for CLECs and ILECs in its *Local Competition Report*, these data provide information only on the combined line counts of CLECs at a state level and does not indicate customer density for an *individual* CLEC within its serving territory.[95]

QSI obtained permission from several of its CLEC clients to analyze their end user customer line count density data and report the results in aggregate (to preserve the

[95] Because the combined CLEC line counts and shares reported in the FCC *Local Competition Report* are lower than the ILECs' line counts and shares (and there are a number of CLECs operating in each incumbent's territory), it is clear that the underlying CLEC-specific customer density is significantly less that the customer density of the incumbents in which territories CLECs operate. For example, in its most recent Local Competitions Report (released in December 2007) the FCC reports that the CLEC share is on average 17% nationwide, and the highest CLEC share (46%) is observed in Rhode Island. However, the Rhode Island's relatively high CLEC market share is based on 21 CLECs and one ILEC, meaning that each individual CLEC in Rhode Island is likely much smaller than the ILEC (The market shares in this example are from the FCC *Local Competition Report* released in December 2007, Table 7, and the number of reporting carriers are from Table 13).

anonymity of individual carriers). The basic design of the study was to construct a measure of customer density of an average individual CLEC within its serving territory (where the CLEC serving territory is defined as the ILEC's wire centers in which the CLEC is collocated) and compare it to the customer density of the respective ILEC. This study consisted of the following steps:

1. The starting point of this analysis was a data set in which individual CLEC line counts were reported by ILEC wire center in which the CLEC is collocated.
2. This information was combined with the ILEC switched line counts and the serving area (square miles) of the same wire centers.[96]
3. Customer density for CLECs and ILECs was calculated for each wire center in which the CLECs are collocated.
4. Wire center level information was aggregated to the state level and an average (composite) CLEC was compared to the corresponding ILEC.
5. State-level data were compared across states within each ILEC's territory[97] and the minimum, maximum and average customer densities were recorded.[98]

The results of this analysis are presented in the following two charts (based on a Voice Grade Equivalent or VGE basis):[99]

[96] The ILEC line counts are based on the following public data sources: Qwest's line counts are its 2007 business and residential line counts reported in its online Iconn database. The most recent public data source for wire center level line counts of other ILECs is the FCC Synthesis Model (the 2000 model results available at the FCC web site). While it is likely that the ILEC line counts (and hence, customer density) decreased compared to 2000, the difference between the CLEC and ILEC customer density (when based on the ILECs' 2000 line counts) is too significant (as shown on charts below) to be erased if the more recent ILEC line count is used. Further, because the 2000 Synthesis Model line counts are close in the vintage date to the date of the FCC CLEC Access order (the order that set the benchmark for CLEC access charges), the use of 2000 line counts is fair. Finally, the ILEC customer density calculated using the 2000 switched line data does not fully capture today's customer base of the ILECs because it excludes the ILECs' special access, Internet (DSL) lines, long-distance customers and video customers.

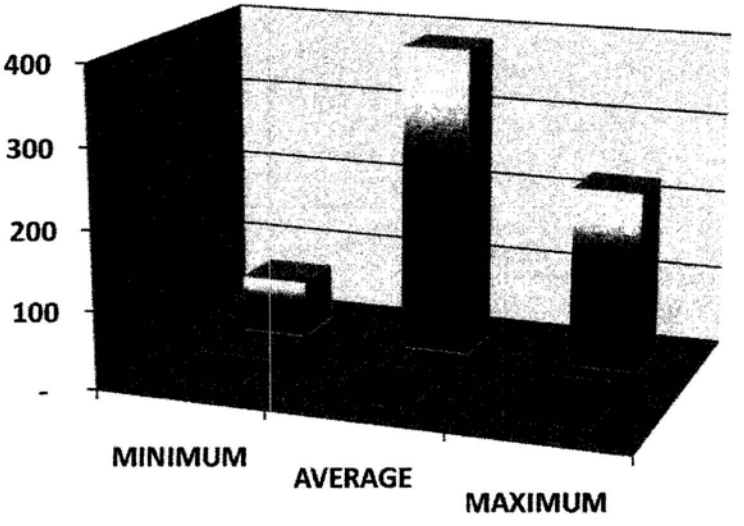
[97] Because of the data limitations, this analysis was performed for the territory of two (out of three) RBOCs.

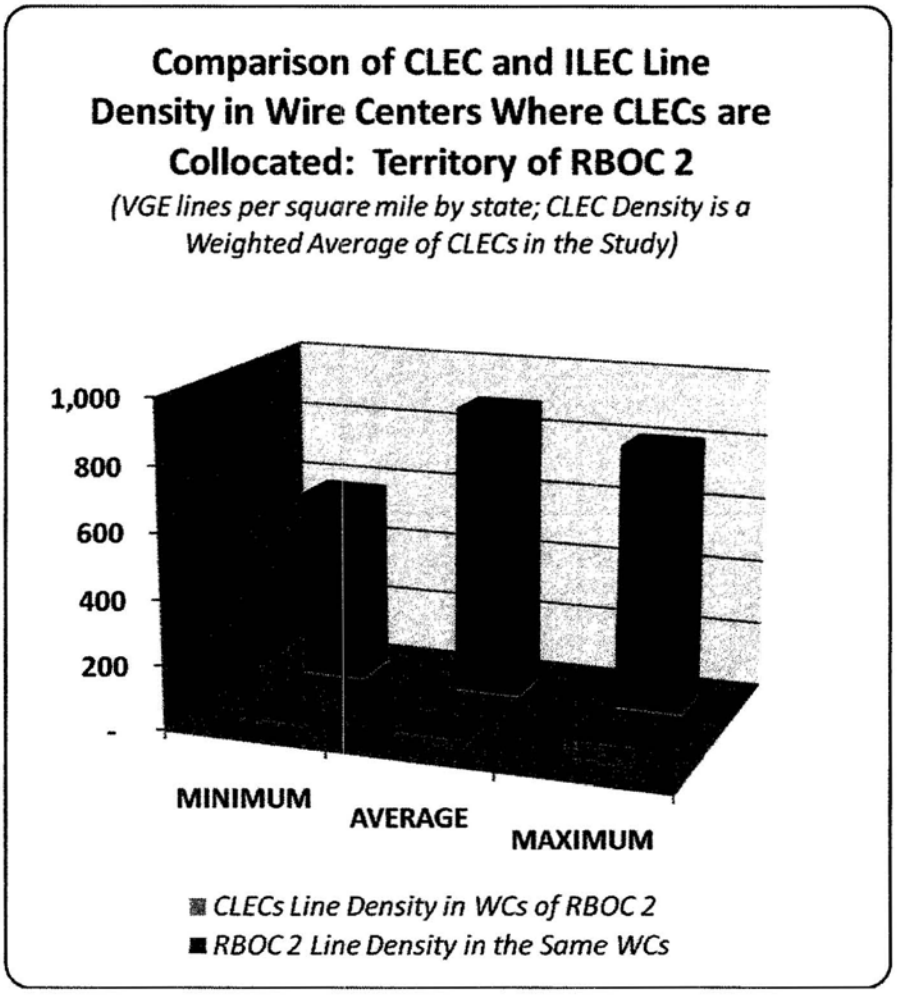
[98] While the "RBOC Average" corresponds to the RBOCs' average across all wire centers/states, the "RBOC Minimum" and "RBOC Maximum" are the measures of RBOC density in wire centers where the Minimum and Maximum CLEC densities are observed. In other words, while the RBOC may have the maximum customer density in state A, the CLEC may have the maximum customer density in state B. In this case the chart depicts the RBOC and CLEC customer densities in state B.

[99] As explained above, in order to preserve the data confidentiality, the operating territories are identified simply as "RBOC 1" and "RBOC 2."

Comparison of CLEC and ILEC Line Density in Wire Centers Where CLECs are Collocated: Territory of RBOC 1

(VGE lines per square mile by state; CLEC Density is a Weighted Average of CLECs in the Study)





These two charts demonstrate that in both territories (the territories of RBOC 1 and RBOC 2), an individual CLEC's customer density is significantly lower than the customer density of the corresponding RBOC. This observation is true on average and at the extremes. Numerically, the gap between the average customer density depicted in the above charts (the relative heights of the "Average" bars) is as follows: An individual CLEC's customer density is 24 times lower than the incumbent's density in the territory of RBOC 1, and 35 times lower than the incumbent's density in the territory of RBOC 2. The following table lists these results (column (c)), along with an additional data point, which is RBOC's statewide customer density (column (d)):

Average Line Densities: CLECs versus RBOCs *(VGE lines per sq. mile)*

Territory	Wire Centers with CLECs' Collocations			RBOC Statewide (Same States)
	Average Line Density per CLEC	RBOC Line Density	Ratio: RBOC Density Over CLEC Density	RBOC Line Density
Column	(a)	(b)	(c)	(d)
RBOC 1	16	389	***24***	50
RBOC 2	25	893	***35***	158

This table shows that a CLEC's average customer line density (column (a)) is lower than the incumbent's density when the comparison is performed in the wire centers where the CLECs operate (which may be relatively more urban/dense wire centers) as well as when the CLEC's line density is compared to the ILEC's statewide line density (column (d)) which accounts for the ILECs' rural areas.

Another data source that supports our findings is a recent study of CLEC line counts in the Minneapolis-St. Paul Metropolitan Statistical Area ("MSA") conducted by the Minnesota Department of Commerce and filed in Ex Parte Comments of the Minnesota Public Utilities Commission in the FCC docket WC No. 07-97.[100] This study represents a fairly comprehensive survey of CLEC line counts in the Minneapolis-St. Paul MSA as it contains aggregate line counts of ten major CLECs in the state.[101] QSI combined the line counts reported in this study with Qwest's publicly available switched residential and business line counts to derive average line densities for CLECs and Qwest in the Minneapolis-St. Paul MSA's wire centers. The resulting line densities[102] are contained in the table below:

[100] Ex Parte Comments of the Minnesota Public Utilities Commission dated February 8, 2008 in FCC docket WC No. 07-97 *In the Matter of Petition of Qwest Corporation Pursuant to 47 U.S.C. para. 160(c) in the Minneapolis/St. Paul Metropolitan Statistical Area* (Qwest's Forbearance Petition).

[101] The ten CLECs include AT&T/TCG, Covad, Eschelon, Integra, MCImetro, McLeodUSA, Onvoy, Popp, TDS Metrocom and XO.

[102] Note that this measure of CLEC line density is different from the measure used in QSI's analysis of CLEC proprietary data because the MN PUC Ex Parte contained only CLEC-total line counts for each wire center, while each individual CLEC may not be present in each wire center.

Average Line Densities in Minneapolis/St. Paul MSA: CLECs versus Qwest
(Lines per Sq. Mile)

Wire Centers in Minneapolis/St. Paul MSA			All MN Qwest Wire Centers
Average Line Density per CLEC		Qwest Line Density (Switched Lines)	Qwest Line Density (Switched Lines)
Mass Market	Mass Market and Enterprise Market		
3	**16**	**429**	**73**

This table shows the gap between the average line density of the ten CLECs in the Minneapolis-St. Paul MSA and Qwest. This magnitude of this gap is striking, even when enterprise CLEC counts are included. (Compare the CLEC density of 16 lines per square mile with Qwest's density of 429 lines per square mile in the same wire centers). What's more, the CLEC line density is several times lower than Qwest's statewide line density despite the fact that the later measure includes more rural/sparsely populated areas of Minnesota.

To summarize the analysis of line densities, CLECs' customer densities are significantly smaller than the RBOCs' customer densities in markets where they compete. Although a lack of data does not permit a full analysis of customer density for mid-size/rural ILECs, the following observations made by Windstream in the recent Texas USF case[103] illustrates the relationship between RBOCs, CLECs and mid-size ILECs in terms of customer densities: AT&T has 94 access lines per square mile in Texas, Embarq has only 27 lines, and Windstream has only 7 lines per square mile.

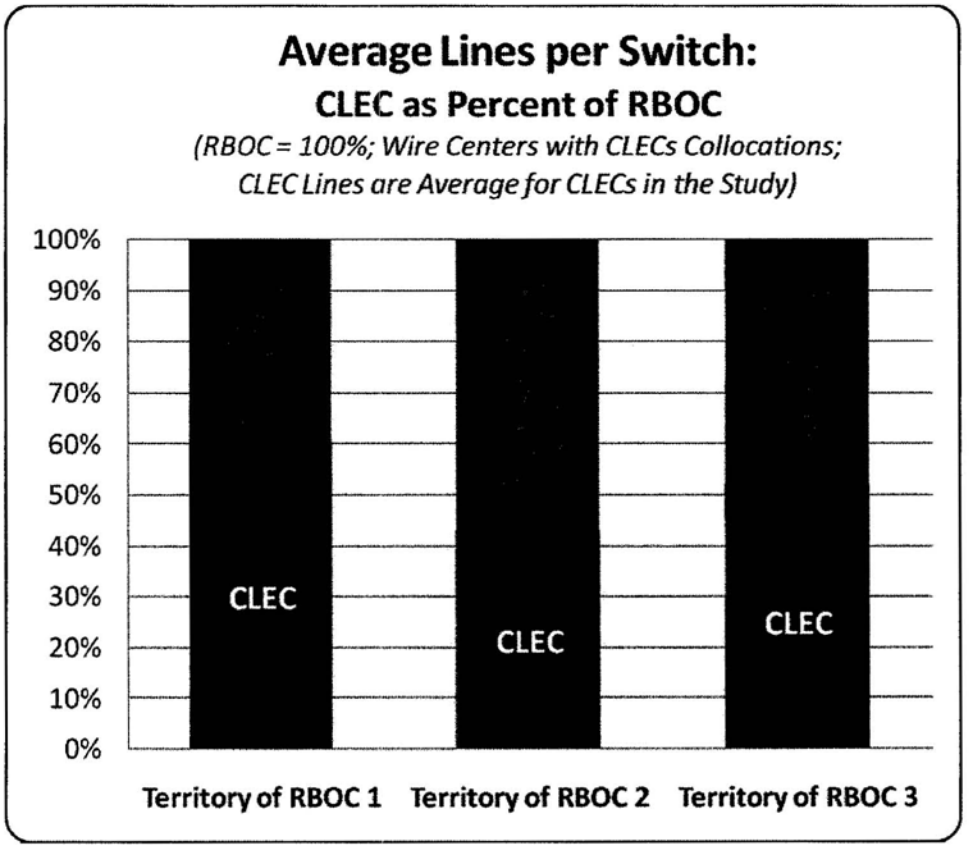
As regulators know from TELRIC and other cost proceedings, customer density is a major cost driver in cost studies. Higher customer density means that certain costs are lower and vice versa. In fact, it is in recognition of this close relationship between customer density and ILEC costs that most regulatory commissions have established different rate zones for UNE rates in TELRIC proceedings, such as urban, suburban and rural rate zones; *i.e.*, rate zones in large part coincide with customer density. Thus, given that the customer bases of CLECs are sparser (or less dense) relative to say, AT&T and Verizon (even in geographic regions in which CLECs compete with AT&T and Verizon), the CLECs' costs are higher on a per unit basis. This effect is partially moderated by the fact that CLECs tend to use the ILECs' UNE loops at TELRIC prices that reflect the ILECs' costs. However, these UNE loops are typically aggregated in collocation arrangements at the ILECs' central offices; from these collocation arrangements, the CLECs then require transport facilities from the ILEC central offices to the CLECs' switch locations. The cost of these transport facilities *are* part of the usage sensitive costs

[103] Texas PUC case No. 34723, Direct Testimony of William F. Kreutz (Windstream), November 30, 2007, p. 16.

of switched access. They are also costs not incurred in the same manner by ILECs and reflect the fact that the CLECs' have a *sparser* customer base.

The CLECs' networks reflect the low density of their customer bases. Only when their customer base approaches the ILECs' in terms of customer density, the CLECs may deploy more switches to cover certain geographic areas and fewer transport facilities. The use of more switches for certain geographic areas would be economically justified by the larger number of customers. Until that time, CLECs need to aggregate customer loops over larger geographic areas. This also means that they incur more transport costs (for the transport facilities used to connect the UNE loops to their switches.)

Another consequence of low customer density is that CLEC switches often support *fewer* lines than ILEC switches despite the fact that a CLEC's switch aggregates traffic over a large territory. QSI made this observation while analyzing the above discussed proprietary line count data of its client CLECs. The following chart depicts this finding:[104]



[104] As explained above, in order to preserve the data confidentiality, the operating territories are identified simply as "RBOC 1," "RBOC 2" and "RBOC 3."

This chart depicts average CLEC lines per CLEC switch (blue bars) as a percent of RBOC lines per RBOC switch, and shows that an average CLEC has less lines per switch than an RBOC in which territory the CLEC operates. Thus, even though the CLEC switch may aggregate customers over a larger area than RBOC switch, the CLEC switch will still experience lower levels of utilization.

ii. CLEC Customers Tend to Be Located at a Greater Distance from the Serving Switch than ILEC Customers

Some of the shortest loops for ILECs are found in their densely populated urban serving areas. Even in those densely populated areas, however, CLEC customers tend, on average, to be located farther from the CLEC's serving central office relative to the distance ILEC customers are from the ILEC central office.

The distributed network architecture employed by CLECs allows customers at great distances from the central office to be connected via transport facilities. CLECs lease existing ILEC loops running between the end user customer's premise and the ILEC's serving central office. When unbundled loops are used, the CLEC still needs to carry the calls generated over those end-user loops with *transport facilities* from the ILEC's serving central office, either directly all the way to the CLEC's own switch or to an "intermediate" ILEC central office where the CLEC has collocated its equipment and then to the CLEC's switch.

The fact that CLECs have longer loops does not necessarily warrant higher access rates, but the fact that these longer loops involve additional traffic sensitive costs related to the *collocation facilities* and *transport components* does. It is important to note that these additional costs for transport and collocation functions are traffic sensitive costs[105] and that they are associated with terminating and originating exchange access traffic. Thus, given that these costs would be incurred even by an optimally efficient CLEC, these costs are legitimate costs to be recovered.

It would be bad public policy for regulators to hold CLECs to a standard, implicit in benchmarking policies (i.e., meet the ILECs' rates or exit), that even an optimally-efficient carrier could not meet. Traditionally in public utility regulation, the notion of just and reasonable rates involves a reasonable opportunity for carriers to recover their reasonable costs. If the standard is set, however, at a level at which even an optimally efficient carrier is unable to recover its reasonable costs, then those rates, as a matter of economics, cannot be just and reasonable.

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105 Many collocation costs are usage sensitive in the same way that trunk ports on a tandem switch are usage sensitive: the larger is the volume of calls, the more trunking facilities will terminate in the collocation space and the more terminating facilities, floor space and power are needed.

F. CLECs Tend to Have Higher Input Costs than the Largest ILECs

Large buyers typically are able to extract better input prices from suppliers than small buyers. AT&T and Verizon, as the nation's largest telecommunications firms, are also the nations' largest purchasers of telecommunications equipment. This gives them significant bargaining power and they are able to negotiate discounts by shifting the bulk of their purchases to the supplier that is willing to offer the best deal. Regulators are well aware of those discounts and have examined them in various proceedings in which large ILEC costs are at issue.[106]

Given that one of the most important determinants of costs of a service is the price of the inputs used to provide that service, CLECs will invariably have higher costs associated with exchange access services than the large ILECs. As input prices increase, so does the cost of service. In fact, the relationship between the level of input prices and the costs that are to be calculated is almost linear in the sense that if input prices double, then one should expect the costs to double. The table below illustrates this relationship for a hypothetical facility, following a traditional layout for a cost study. As can be seen from the table, when hypothetical input prices are $100, the monthly cost is calculated to be $3.33; when input prices double (*i.e.*, increase to $200), then the monthly cost doubles as well.

EF&I Facilities[107]	**Fill Factor**	**ACF**[108]	**Monthly Costs**
(a)	(b)	(c)	((a)/(b)x(c))/12
$100	80%	0.32	$3.33
$200	80%	0.32	$6.67

By contrast, the CLECs are much smaller and purchase fewer facilities and equipment than do, say, AT&T and Verizon. As a result, CLECs do not have the bargaining power of the large ILECs to induce suppliers to offer substantial discounts or to bid against one

106 *See, e.g.*, California Public Utilities Commission *Rulemaking on the Commission's Own Motion to Govern Open Access to Bottleneck Services and Establish a Framework for Network Architecture Development of Dominant Carrier Networks, Investigation on the Commission's Own Motion into Open Access and Network Architecture Development of Dominant Carrier Networks*, Decision 06-03-025, Rulemaking 93-04-003; Investigation 93-04-002 (Verizon UNE Phase), Dated March 15, 2006. *See also,* Illinois Commerce Commission Docket No. 02-0864 Order *Illinois Bell Telephone Company Filing to Increase Unbundled Loop and Nonrecurring Charges,* Dated June 9, 2004; and Georgia Public Service Commission Docket No. 14631-U *In RE: Review of Cost Studies, Methodologies, Pricing Policies, and Cost Based Rates for Interconnection and Unbundling of BellSouth Telecommunications, Inc.'s Services,* March 18, 2003.

107 The term "EF&I" refers to the engineered, furnished and installed investment in facilities.

108 The term "ACF" means annual cost factor, a factor used to convert the EF&I investment into an annual recurring cost stream. When these annual costs are divided by 12, they become monthly recurring costs.

another. In short, CLECs' input prices tend to be higher than those of the largest ILECs, such as AT&T and Verizon.

Furthermore, the prices of major inputs used by CLECs in the provisioning of exchange access – inputs that CLECs purchase from large ILECs – have been increasing. Competitive carriers purchase much of their transport and loop capacity supporting switched access services directly from AT&T, Verizon and Qwest in the form of special access services and UNEs. In many circumstances, these fees paid by the CLECs can constitute as much as 40% to 60% of their overall cost structure. Since the FCC originally issued its *CLEC Access Reform Order* in 2001, prices paid by CLECs to purchase loops and transport services from the large incumbents have increased substantially, more than doubling within some companies. These increases result largely from the fact that AT&T, Verizon and Qwest have used increased pricing flexibility granted by the FCC to increase special access prices in critical markets while at the same time limiting access to less-costly UNE products per the FCC's finding of non-impairment in certain areas in its *Triennial Review Remand Order*. Special access services and switched access services work as effective substitutes in the overall market for telecommunications capacity. Where switched access prices are too high, carriers always have the ability to connect directly to the customer via special access and bypass the switched provider. Yet, even as the large ILECs increase prices for dedicated capacity, they are at the same time demanding that regulators force CLECs to reduce switched access rates their affiliated IXCs pay when they use those facilities to originate or terminate toll traffic. With this in mind, it is not surprising that AT&T and Verizon attempt to convince regulators that the CLECs' costs should be ignored in establishing reasonable switched access rates – digging too deeply into CLEC costs is sure to highlight the "have their cake and eat it too" attitude of the large ILECs.

In sum, even if a CLEC had a customer base identical to the large ILECs' in terms of customer densities (though not size), a network architecture identical to the large ILECs (though smaller), and ran its operations with the same level of efficiency, the CLEC's costs associated with providing switched access services would still be higher than the large ILECs' because it pays *higher prices* for its network facilities than do the large ILECs.

G. CLECs Are Forced To Bear the Capacity Risks for Accommodating IXC Traffic

One important aspect of the exchange access provider / IXC relationship that is often overlooked is that exchange access services that are sold on a traditional per minute-of-use basis forces the provider of exchange access services to bear all of the *capacity risk* associated with deploying fixed capital. Traditional switched access arrangements allow interexchange carriers to purchase access to local networks on a "minute-at-a-time" basis without any commitment as to volume or term. This structure is largely a vestige of the post-divestiture marketplace where the FCC and Judge Green were attempting to protect

fledgling long distance providers from the extreme economies AT&T could expect to enjoy when purchasing enormous switched access volumes from its prior Bell System brethren.[109] If all carriers could purchase a minute of switched access for the same price, AT&T was restricted from negotiating substantially better prices based upon its tremendous volumes. Today, long distance providers still largely enjoy the ability to terminate or originate calls on competitive local networks without the requirement that they purchase some minimum capacity or minutes of use volume. Unfortunately, that rate structure forces smaller, competitive LECs to invest in capacity sufficient to accommodate the totality of switched access traffic it may need to support, without any commitment or joint-planning that ensures they recover the costs of installing that necessary capacity.

For example, while AT&T may require 1,000,000 minutes-of-use from CLEC A in Month 1, it may well develop direct connections to large customers or move large amounts of traffic to alternative networks months later leaving the CLEC with investment in substantial capacity that it is now unlikely to recover. In short, CLECs bear substantial capacity risk (and cost) associated with maintaining their networks to accommodate what is largely "casual traffic" from IXCs that CLECs have little ability (physically or contractually) to manage and no assurances that the IXCs will in fact originate or terminate the necessary traffic volumes to recover their investments. While this is generally true for exchange access providers under the existing per minute-of-use exchange access regime, the capacity risks are greater for smaller carriers (like CLECs) because they face lumpier investment when adding new capacity. Those risks result in higher costs that are legitimately included in CLEC exchange access charges.

While it is conceivable that these types of capacity costs could be better managed through arms-length negotiations between IXCs and CLECs, unfortunately, the FCC's *CLEC Access Reform Order* – by establishing a baseline rate equal to the price per minute assessed by incumbent carriers – gives IXCs little incentive to consider anything more or different. In other words, the ability of CLECs to provide stand-by capacity is fundamentally undermined by a benchmarking policy that forces CLECs to provide exchange access services at rates that are generally not compensatory. Expanding a benchmark policy to CLEC *intra*state exchange access rates further reduce incentives for more rational agreements.

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[109] As the FCC noted: "Prior to the FCC's 1993 restructuring of local transport rates, LECs recovered their transport costs through a rate structure based on the "equal charge per minute of use" requirement in the Modification of Final Judgment (MFJ). The "equal charge per minute of use" rule required that the Bell Operating Companies charge an equal amount per unit of traffic for delivery or receipt of traffic of the same type between end offices and IXC POPs within an exchange area. This approach essentially required all interstate access service customers to pay averaged rates. The actual type of facilities --voice grade, DS1, or DS3 -- that were used to transport a customer's traffic between the IXC POP and the LEC serving wire center did not affect the charges that were assessed, because the rates were usage-sensitive and, generally, distance sensitive. Under the terms of the MFJ, the equal charge rule expired on September 1, 1991." See, *In the Matter of Transport Rate Structure and Pricing Resale, Shared Use and Split Billing*, Report and Order, CC Docket No. 91-213, Adopted February 27, 1998, para. 3.

H. CLECs Should Not Be Asked To Shift Under-Recovered Traffic Sensitive Costs onto End Users

Some advocates of benchmarking have suggested that CLECs should recover their costs of providing exchange access services from end-users if a regulatory benchmark/cap results in below cost exchange access rates for CLECs. This suggestion is misguided for the following reasons.

First, this suggestion ignores the fact that the CLECs do not have nearly as much ability as the large ILECs to recoup network costs by raising the rates for services with flat-rated, non-usage sensitive rates (like monthly local telephone service). CLECs compete in local exchange markets and must meet or beat prevailing end user prices. This means that they cannot simply increase their rates to recover costs unrelated to the provision of local exchange services. That is, aside from the fact that such a cross-subsidy is unjustified, markets dynamics won't tolerate it.

Further, as explained above, the typical CLEC network architecture generates more traffic sensitive costs than the ILEC network architecture. This is true because CLECs deploy relatively more transport facilities than ILECs and they require collocation facilities. The costs of both transport and collocation facilities tend to be traffic sensitive. Further, much of the CLECs' traffic is off-net traffic. The combined effect is that a much larger portion of CLECs' overall costs are traffic sensitive. This also means that any under-recovery of exchange access related costs – i.e., traffic sensitive costs – weighs more heavily on the CLEC than on the ILEC and causes a much larger shift of unrecovered costs to other customers or services.

Last, the recommendation falsely suggests that ILECs are doing the same. However, ILEC exchange access rates have *not* explicitly been set below the ILECs' costs of providing exchange access services – as benchmarking would for CLEC. To the contrary, all indications are that the ILECs' exchange access rates are compensatory. Thus, forcing CLECs to shift under recovered exchange access costs to their end-users puts the CLECs at a severe competitive *dis*advantage in the retail market.

VII. CONCLUSION

Contrary to recent advocacy by the large, vertically-integrated ILECs/IXCs that there is market failure that distorts CLEC exchange access rates, the data show that there is no systemic problem: as we have shown, CLEC exchange access rates, on average, are reasonable and not indicative of market power. In fact, when compared to the rates of other carriers, CLEC exchange access rates are at levels one would expect them to be given the disparate cost characteristics of various carriers – i.e., slightly higher than large ILECs but lower than the mid-sized and small ILECs.

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EXHIBIT 3